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Table of Contents

Editor's Note 220

Articles

The Politics of British Naval Failure, 1775-1777
by DANIEL A. BAUGH 221

The Tonnage of Europe's Merchant Fleets, 1300-1800
by RICHARD W. UNGER 247

Query and Response 262

News 266

Book Reviews

JOHN B. HATTENDORF, ED., *The Influence of History on Mahan*
by Richard W. Turk 267

ERIC C. RUST, *Naval Officers Under Hitler: The Story of Crew 34*
by Michael L. Hadley 268

ROBERT S. WEDDLE, *The French Thorn. Rival Explorers in the Spanish Sea, 1682-1762*
by Carla Rahn Phillips 269

RICHARD ELLIS, *Men and Whales*
by Kenneth R. Martin 270

COMMANDER TONY GERMAN, *The Sea Is At Our Gates: The History of the Canadian Navy*
by Gerald E. Panting 271

ALAN D. WATSON, *Wilmington, Port of North Carolina*
by James M. Morris 272

A. A. HOEHLING, *The Fighting Liberty Ships: A Memoir*
by W. M. P. Dunne 273

STUART M. FRANK, *Dictionary of Scrimshaw Artists*
by Richard C. Malley 274

GEOFFREY M. FOOTNER, *The Last Generation: A History of a Chesapeake Shipbuilding Family*
by Robert Fallaw 275

MIKE BENT, *Steamers of the Fjords*
by John R. Herbert 276

Index to Volume 52 281

Editor's Note

Basic research by scholars, whether working with printed materials in libraries and archives or underwater to discover artifacts which enlighten the historical record, is at the heart of the historical enterprise. Sometimes it may appear that students of history are too readily drawn to the controversies of the day, with their attendant political and social concerns, at the expense of basic research. The temptations are plentiful, and certainly this International Maritime Year has had its share of public controversy — primarily centered on Christopher Columbus.

Some readers may have had enough of quincentennial celebrations, counter-celebrations, and reexaminations of Columbus, now "playing" in bookstores, movie theaters, on stages, and even in opera houses on both sides of the Atlantic. They may wonder if these efforts are worthwhile and if we have moved closer to understanding Columbus and his age. Can we answer positively the question of whether anything new or important has come from the attention given to this subject? The answers is surely yes. The increased archaeological work in the Caribbean has prompted investigations which have yielded important new material. The most recent announcement is the discovery of a late fifteenth-century ship which may be the oldest European vessel found in the Americas. This vessel, possibly a caravel, foundered on a reef thirty miles north of Grand Bahama Island. We hope that the treasure hunters who found the wreck will allow professional archaeologists to excavate the site properly. The techniques for such potentially important excavations have been perfected over the last few decades at centers such as the Institute of Nautical Archaeology at Texas A&M University. The program in maritime history and underwater archaeology at East Carolina University has produced a corps of qualified researchers building upon these initiatives.

The investigation of archives and other sources for Columbian materials, coupled with the publication of newly edited guides to those sources, will enable scholars to find and examine materials that were previously difficult to locate or identify. Aids to the scholar include the new edition of Columbus's *Diario* by James Kelley, Jr. and Oliver Dunne, *The Book of Prophecies* by Delno West and August Kling, the collection of sources by French scholar Michel Balard, and numerous works in Italian and Spanish by scholars such as Paolo Taviani and Consuelo Varela. New bibliographies including David Henige's on the first voyage and G. Foster Provost's annotated guide to Columbus scholarship will ease the initiation of new research.

We remained transfixed by the controversy of the five-hundredth anniversary of Columbus's voyage of 1492. Numerous biographies including those by William and Carla Rahn Phillips and Felipe Fernández-Armesto, and interpretive works such as *Ecological Imperialism* by Alfred Crosby, *The Invasion Within* by James Axtell, and *Inventing the Flat Earth* by Jeffrey Russell, have greatly enlivened the literature. But they have not resolved the controversies.

Even as I write, preparations were announced by theater promoters in my community for a counter-celebration of the quincentenary, featuring American Indians who seek to gain new respect and sympathy from the public at the expense of Columbus. Spoofs have even moved into the environmental arena as a "Christopher Columbus Eco-cabaret" performance is included in the program. The irony of condemning Columbus for his abuse of the environment while living on the shores of Lake Erie, with its own substantial ecological problems, brings grins to some who wonder why we need to reach back half a millennium to find the roots of environmental problems to which we contribute daily. If one has the appropriate sense of history and humor, however, quincentennial celebrations can be both instructive and fun. After all, they are by and about people.

TIMOTHY J. RUNYAN

Cleveland, Ohio

The Politics of British Naval Failure, 1775-1777

DANIEL A. BAUGH

It is a fact known to scholars, though not to American schoolchildren, that Britain lost the war for American independence at sea as well as on land. This is a curious fact. Britain was the pre-eminent naval power of the world in the eighteenth century, and indeed at the close of the preceding war her naval superiority had never been greater. Therefore, one of the most interesting questions that can be asked about the war for America is why Britain's failure at sea occurred.

Naval historians have long been aware in a general way of this failure and have offered a variety of explanations. Everywhere in the historiography one finds an emphasis on prewar factors, such as peacetime budgetary stringency after 1763 and shortages of shipbuilding timber. Another line of explanation has held that the professionalism and dedication of naval officers was at a particularly low ebb on the eve of the war, the corps reflecting the allegedly corrupt standards of public employment at that time.[1] Even where there is some truth in the explanations, their bearing on the question is minor. They all have two things in common: first, they address basic and rather long-term factors of naval strength, leadership, and efficiency; second, they focus almost entirely on matters internal to the naval organization. They appear to have been chiefly inspired by the need to explain how naval performance could have descended so strikingly from the great heights of achievement in the Seven Years' War.

Another line of explanation for the navy's failure, almost universally accepted, has been the surmise that Great Britain really had no chance of overmatching the combined forces of France and Spain at sea in this particular war because she had no continental allies to pose military threats that would draw her enemies' attention and resources away from naval preparations. Without doubt, this circumstance presented the British navy with a more difficult challenge, but it was not the decisive cause.

One purpose of this essay is to make clear that there were really two great naval failures, which it is useful to keep distinct. The second of these is rightly the best known: the failure to overmatch the combined forces of France and Spain at sea, the measure of strength being ships of the line of battle. Though the bitter harvest was reaped in the years after 1778, I have argued elsewhere that the seeds were sown in the years 1776 and 1777, when the French were building up their active force sooner than the British. It was very difficult for Britain, although its naval resources and organization were the finest in the world, to make up for the late start in mobilizing these large ships. Thus, France and Spain were given their best naval opportunity of the eighteenth century. The diplomatic situation enhanced that opportunity, but did not create it.[2]

In contrast with the second, the first great naval failure is not well known. It is the failure to deny use of the sea to American vessels (merchant, privateering, and naval) and neutral vessels carrying contraband cargo during the opening years (1775-1777). In this case, cruisers were the chief instruments. Traditional naval history hardly recognized that this failure occurred, or even that it could have occurred. For according to the older tradition of command-of-the-sea theory, the British navy indisputably and continuously enjoyed naval superiority in American waters during these years (before the French navy entered the picture) because the Americans had no battle fleet to challenge it. The importance of having an adequate force of cruisers for denying use of the sea to the enemy's commerce and commerce raiders — which the Royal Navy at this time failed to do — was mentioned by the theorists, but gave way in the actual histories to an almost exclusive emphasis on major sea battles and campaigns. As a result, the first great naval

1. A brief summary of long-standing views of naval historians on this subject may be found in G. J. Marcus, *A Naval History of England*, vol. 1 (London, 1961), 412-21.

2. These are controversial statements. My argument is set forth in Daniel A. Baugh, "Why did Britain lose command of the sea during the war for America?" in Jeremy Black and Philip Woodfine, eds., *The British Navy and the Use of Naval Power in the Eighteenth Century* (Leicester, 1988), 149-69.

failure has not received much attention.[3] One purpose of this essay is to tell the story of this first naval failure.

But the more basic purpose is to explain the illusions and decisions which led to both failures. Naval incapacity in this war was not the result of prewar structural problems and neglect of peacetime upkeep. This essay will show that it was the result of strategic and political decisions taken after hostilities began. The policy which the North administration pursued from mid-1775 to the end of 1777 sacrificed Great Britain's effectiveness in the sphere of sea power to other priorities.

The Strategic Decision

The American Revolution became an armed conflict in April 1775 because by the end of 1774 Lord North's administration committed itself unalterably to the principle of parliamentary sovereignty over the colonies. Naturally the imperial army at Boston attempted to deprive the New Englanders of arms, but London's initial general plan of hostilities called for bringing the Americans to reason by applying naval pressure on their commerce. Before the summer of 1775 was over, however, ministerial opinion swung toward the idea of a massive military thrust. An army larger than any land force that Britain had hitherto sent across an ocean was to be dispatched to North America with the aim of knocking the rebellion quickly off its feet. The replacement of Lord Dartmouth by Lord George Germain as secretary of state for the American colonies, which formally occurred in November 1775, was in fact foreshadowed by the strategic choice that had been made during the summer: Germain had been consulted on the plan and was known to favor it strongly, well before he was officially installed as the man chiefly responsible for its military execution. In late July Germain had written to a military friend, General Sir John Irwin: "One decisive blow at land is absolutely necessary," and in mid-September: "As there is not common sense in protracting a war of this sort, I should be for exerting the utmost force of this kingdom to finish this rebellion in one campaign."[4] Not everyone in the cabinet was as confident of success as Germain, but there was broad agreement on the appropriateness of a strong and swift military effort. The slower maritime approach was set aside.

The maritime alternative had been suggested by, of all people, the administrative head of the army, Lord Barrington (Secretary at War). In two letters to Lord Dartmouth, Barrington had argued the case for bringing the colonists to obedience through economic distress, "by our Marine totally interrupting all commerce and fishery, and even seizing all the ships in the ports, with very little expense and less bloodshed." How sanguine he was of success by these methods is not easy to judge. But he was convinced beyond doubt that trying to accomplish the task by land campaigns was probably futile and certainly unwise. He cited the facts of American geography, the colonists' political traditions, and the character of the population (an extensive country "full of men accustomed to fire arms"). Even if successful, a military contest would "cost us more, than we can ever gain by the success." There is irony in the point that, whereas the head of the War Office opposed the military plan, the First Lord of the Admiralty, Lord Sandwich, expressed his strong support of it.[5] No doubt the irony reveals the deep anxieties which this problem provoked in the minds of the department heads who would bear responsibility for the conduct of their forces.

The cabinet members who made the decision were aware of Barrington's arguments (although as a high government official he loyally chose not to voice them in public). He even contrived a method of bringing George III's attention to them by claiming that it was his duty to lay before His Majesty two letters addressed to him as Secretary at War by Adjutant General Edward Harvey. These letters contained views similar to Barrington's, General Harvey declaring the military plan to be "as wild

3. There are, however, some important exceptions. The best early account, though brief and sketchy, is in the second chapter of Robert G. Albion and Jennie B. Pope, *Sea Lanes in Wartime* (New York, 1942). David Syrett, "The Fleet that Failed," U. S. Naval Institute *Proceedings* (October 1975): 66-77 is a pioneering article, and Syrett has amplified his discussion in *The Royal Navy in American Waters 1775-1783* (Aldershot, England, 1989). An account may be found in Ira D. Gruber, *The Howe Brothers and the American Revolution* (New York, 1972); my disagreements with Professor Gruber's interpretation on key points will be evident. I must mention another item: William B. Willcox, "Why Did the British Lose the American Revolution?" *Michigan Alumnus Quarterly Review* (1956): 317-24. This exploratory essay contains numerous mistakes — one of the biggest is the idea that the British government "until 1777 subordinated land operations to the needs of blockade" (p. 320). Nevertheless, it first turned my thoughts to the bearing of strategic and political choices on the question of naval failure. The best survey of British strategy and its conduct in this war is still Piers Mackesy, *The War for America, 1775-1783* (London, 1964), and it does take this first naval failure into consideration; on this subject, however, it has been largely superseded by Syrett's *Royal Navy in American Waters*.

4. Germain to General Irwin, 13 September 1775, Historical Manuscripts Commission, *Report of the Manuscripts of Mrs. Stopford-Sackville* [hereafter HMC, *Stopford-Sackville*], vol. 1 (1904, 1910), 137. In late July he had said that a decisive blow was necessary before giving over the task of subduing America to the navy (ibid., 136). He later made no mention of giving the task over to the navy. Perhaps in this fragment of evidence we can see the transition of emphasis. Piers Mackesy, in *War for America*, calls attention to the full significance of this key decision on strategy.

5. Shute Barrington, *The Political Life of William Wildman Viscount Barrington* (1815), 148-57. For Lord Sandwich's views, see Bernard Donoughue, *British Politics and the American Revolution* (1964), 253.

John Montagu, Fourth Earl of Sandwich and First Lord of the Admiralty, by Thomas Gainsborough. Photo courtesy of the National Maritime Museum, London.

an idea as ever controverted common sense." The king, however, firmly sided with the military approach. Noting that one of Barrington's arguments against it had been the sheer impossibility of procuring enough troops to put a force of 20,000 regulars in America by the following spring, the king commented to North: ". . . he is diffident as to raising Recruits, but that is as much occasioned from his wish to have the American War alone carried on by Sea." George III was as conscious as anyone that a crucial strategic decision was being made.[6]

Although a purely maritime strategy was rejected, nothing was said about relaxing the program of maritime pressures for which decrees had been issued. These included orders in council prohibiting importation of arms and gunpowder into America and statutes for restraining the trade and fisheries of New England. In fact, as the year 1775 unfolded, more colonies were added to the list of those whose trade was to be restrained, and in December the various Restraining Acts were replaced by the Prohibitory Act (16 Geo. III c. 5), which authorized, in effect, a complete closure of the thirteen colonies to all external commerce. The naval commanders in America were ordered to carry out the program. Did all this mean that, in effect, a dual strategy was adopted?

The acts for restraining and prohibiting colonial trade were debated intensively in both houses of Parliament. The Restraining Acts served to exhibit parliamentary support for measures of coercion; they also conveyed a punitive threat to any colony in rebellion, while giving warning to others that might be pondering rebellion. They were mainly designed as maneuvers in a serious game of domestic and imperial politics, and when overt hostilities became widespread their significance diminished. That the Prohibitory Act had sharp political implications was certainly the view of John Adams, but a blanket prohibition of trade with the American colonists functioned also as an instrument of war because it could affect the revolutionary government's financial capabilities.[7] So the Prohibitory Act was partly political and partly strategic in its purposes, but the prohibitions against shipping cannon, small arms, ammunition, powder, and other "warlike stores" to American colonial ports were strategic measures, designed to make the British army's task easier.

The question of powder and arms shipments is important. It is obvious that the government realized very early on that gunpowder was the Achilles heel of an organized armed rebellion, since nearly all of it had to come from abroad. As early as September 1774 London knew that American colonists were ordering gunpowder in quantity from Amsterdam. The government moved quickly to prevent seizure of British arms depots in America. In the maritime sphere, its response was also prompt and vigorous. British merchant vessels were forbidden by order in council (19 October) to carry arms or powder to the

6. On these transactions see Donoughue, *British Politics*, 157-82; Sir John Fortescue, *The Correspondence of King George the Third*, vol. 3 (1928) [hereafter cited as Fortescue, *Correspondence*], xiii, 248-51. See also Fortescue, *A History of the British Army*, vol. 3 (1902), 167-8.

7. When John Adams received word of the Prohibitory Act's passage, he recognized immediately and with exultation that it amounted to an act of severance and therefore an "Act of Independency. . . . It throws thirteen Colonies out of the Royal Protection, levels all distinctions, and makes us independent in spight of our supplications and entreaties." Quoted in Allen French, *The First Year of the American Revolution* (1934), 568. It was also what Adams had long labored for, of course. On the importance of these measures in British political contentions, see Donoughue, *British Politics*, chapters 11 and 12.

colonies. The gunboat *Wells* was ordered to Amsterdam to watch a Rhode Island vessel which was reported to be loading there with firearms and small cannon and to arrest her as soon as she sailed beyond "the limits of any port belonging to the States General." The appearance of a British gunboat off Amsterdam, though it provoked diplomatic protests, induced the Dutch government to forbid sales of munitions to American buyers.[8]

This method, however, left a gigantic loophole. Contraband items could be shipped via the West Indies, where Dutch and French islands became key connecting points. The result was that any truly effective choking off of powder and arms importations by the Americans had to be accomplished by British naval forces in the Caribbean and on the North American coast. This was the nub of the case for imposing a close naval watch on the American seaboard as quickly as possible, and the case was enhanced rather than diminished by the prospect of extensive military operations in America. Thus, although the war planners in London rejected a purely maritime strategy, they still had a very good strategic reason to mount a blockade of North American ports if it were feasible.[9]

But was it feasible? From a technical viewpoint, curtailing munitions importation was more difficult to achieve than injuring colonial commerce, partly because it was only necessary to capture a percentage of outgoing traders in order to frighten the rest into staying put, whereas incoming vessels could often contrive to sneak into port somewhere. The most serious problem was that of building up a large cruiser squadron. This would take time, and so would capturing the needed bases on the American coast — about a year. Thus, in the early months of hostilities a considerable supply of gunpowder would get in. After that, however, the Americans might have a serious problem. Though the task of covering so extensive a coastline would require a timely and determined effort, a strategically effective blockade was feasible.

In the event, it was scarcely tried. British resources were overwhelmingly directed toward the army's major operations. There were strong arguments in favor of the military strategy, and whether it could have succeeded if it had been properly carried out can never be known. For us, however, the interesting point is that no one in the British government ever said that the idea of blockading North America should be abandoned. On top of this, the leaders of government were reluctant to recognize, let alone admit openly, that the strategic choice was likely to have serious naval consequences. The politics of British naval failure in the American war hinge on this reluctance to recognize the navy's inability to serve the army's needs and to accomplish a reasonable degree of maritime containment simultaneously. A much larger assemblage of cruisers was required. To unravel the workings of these politics one must understand the history as it unfolded.

The North American Squadron Under Graves and Shuldham

Denying use of the sea to opponents on the long American coastline required large numbers of frigates, sloops, armed brigs, and schooners.[10] Since the Americans could not call upon any line of battle ships, no answering force of British heavyweights was necessary. On 1 January 1775 the force of the British navy in North America numbered twenty-four ships, made up of four ships of fifty to seventy guns (these were not cruisers), seven frigates (twenty to forty-four guns), five sloops of war, and eight armed vessels. Six months later the total was twenty-nine, reflecting the addition of some sloops which had been ordered to be added to the squadron in January.[11] This body of ships was responsible for assisting the army in New England, prohibiting the importation of powder and arms, and (beginning in the spring) enforcing the Restraining Acts. It was certainly not adequate for these tasks, let alone the others that soon arose.

8. See generally Daniel A. Miller, *Sir Joseph Yorke and Anglo-Dutch Relations 1774-1780* (The Hague, 1970), esp. 37-40. See also Donoughue, *British Politics*, 207-8. Particular orders connected with the early gundpowder-shipment alarms are printed in *Calendar of Home Office Papers, 1773-1775*, ed. Richard A. Roberts (1889), 243-55. On the colonial side the evidence is copious. For instance, "The Maryland Council of Safety's principal concern at that time [autumn 1775] was to build up the state's supply of gunpowder, arms, and ammunition" (William S. Dudley, "Maryland at War on the Chesapeake, 1776-1783," in *New Aspects of Naval History*, ed. Craig L. Symonds, Papers of the Fourth Naval History Symposium, U. S. Naval Academy [Annapolis, 1981], 103.)

9. The interception of powder and arms could also be conducted in the Caribbean. Space does not allow a discussion of the role of the forces based at Antigua and Jamaica in the effort to interrupt American sea communications. In spite of the feebleness of their reinforcement from England and their difficulties with neutral vessels carrying false shipping papers, these forces made numerous captures. This aspect of the story is documented in the *Naval Documents of the American Revolution* collection (Washington, D.C.: U.S. Naval History Division, 1964 - in progress) [hereafter cited as *NDAR*]. See also Miller's *Sir Joseph Yorke*, especially his citations on p. 32.

10. A frigate was, by the Royal Navy's system of classification, a fifth- or sixth-rate ship, the former being larger and carrying more guns; these were the large cruisers. A Royal Navy "sloop" carried the full name "sloop of war." It was a slightly smaller cruiser, but still a considerable ship of force; in size it was much bigger than a merchant sloop, with which it should not be confused. Armed brigs or schooners were small and could often be purchased locally and fitted out by order of the commanders in chief in America.

11. *NDAR* 1: 47, 785. It will be obvious that this series was indispensable to my research.

Yet it was not until June 1775 that the cabinet moved to augment the squadron. On 17 June the Admiralty was directed to add frigates "sufficient for answering" certain maritime "objects": the enforcement of the Restraining Acts, protecting loyalist commerce, and denying aid to New England from the southern colonies were mentioned, adding to the list of responsibilities. A week later the Admiralty informed Admiral Samuel Graves, the commander in chief of this squadron, that three more sloops of war were ready to go immediately and four 28-gun frigates were fitting out. Graves was told that the "objects" decided upon by the cabinet were ones "which their Lordships have very much at heart and consequently recommend to your most serious attention."[12] On 1 July the cabinet urged the Admiralty to expedite the sending of more frigates so that New York, Charleston, and the Delaware and Chesapeake bays (as well as New England) could be monitored. Three weeks later the Admiralty was ordered to send as much force to America as the general naval situation would allow.[13] At the Admiralty, Admiral Sir Hugh Palliser set to work and calculated the number of ships that would be needed and on which stations. He concluded that fifty were required, of which twenty-two would have to be at or near Boston, mainly to serve the army there. As to the whole plan, he commented, a "less number of ships" would be "insufficient to perform the services expected." His scheme of disposition was forwarded to Admiral Graves on 3 August with the comment that their Lordships did not mean that he would have to follow it precisely. The evidence seems strong that the cabinet and the Admiralty really intended to employ "the most vigorous Efforts, by Sea and Land."[14]

Lord Sandwich, the First Lord of the Admiralty, sent a private letter to Graves on 25 August, informing him that he would have a "very great naval force" under his command (and telling him also that great achievements were expected by the people back home). "You are going to be greatly reinforced," Sandwich wrote. "Whatever wants you may have, let us know them, and you may be assured you shall be supplied liberally."[15] Yet the naval story of the first year of the war is one of woeful inadequacy, caused initially by the lateness of the government's decision to reinforce the American squadron, and after mid-June by an unusual slowness in preparing additional frigates and sloops. At the same time various needs for naval services in America were rapidly multiplying.

Sandwich knew that Graves's squadron was too small for its tasks, and he must also have known that it would continue to be too small for many months to come. The evidence on the first point is clear. A letter from the king to the First Lord on 25 August reveals that Sandwich had been privately defending Graves's conduct, which was then being loudly criticized in London, by pointing out that the squadron was insufficient.[16] As for the prospects of reinforcement, Sandwich obviously knew that Graves's "very great naval force" was a phenomenon of the future, for he spoke of it in the future tense, and he must have known that when Palliser calculated the minimum requirement at fifty ships, he reckoned thirty-one already in America, ten more "going," and nine more "wanted." Of the ten "going," none had yet sailed from England; the nine "wanted" would not be ready for many weeks.[17] Graves was not told this. On 9 August Graves wrote to the governor of Virginia and mentioned that the reinforcements which he had repeatedly requested from England could not be "far off."[18] His optimism was wholly unjustified. In fact, between 1 June and 25 September only two warships arrived from England, both sloops.[19] Throughout 1775 the North American squadron remained small.[20]

Although Sandwich realized that the services that Admiral Graves was expected to perform were extensive,

12. *NDAR* 1: 488, 492.

13. Ibid. 1: 1307-8, 1332.

14. G. R. Barnes and J. H. Owen, eds., *The Private Papers of John, Earl of Sandwich*, vol. 1 (Navy Records Society, 1932), 64-6 [hereafter cited as *Sandwich Papers]*; also *NDAR* 1: 1307, 1349-51. See HMC, *Stopford-Sackville* 2: 1-2 for evidence of the government's initial inclination toward a war by sea.

15. *Sandwich Papers* 1: 70-2.

16. George III's letter grudgingly admitted that Graves's dispatches seemed to indicate "his being attentive to his duty," and added: "The more frigates can be speedily sent to reinforce his squadron the better." Also, in a letter to Graves, Sandwich acknowledged the insufficiency with a vague phrase: he spoke of the criticisms as coming from "the mouths of those who are unacquainted with your force and the extensive services that your fleet is to be employed in." The letters are printed in *Sandwich Papers* 1: 68-72. Donald A. Yerxa, in "Vice-admiral Samuel Graves and the North American Squadron 1774-1776," *Mariner's Mirror* 62 (November 1976): 378, is right to assert that Palliser's scheme for fifty ships was of itself "a frank confession that Graves's force was far too small."

17. *Sandwich Papers* 1: 66.

18. *NDAR* 1: 1104-5; see also 1203, 22 August 1775.

19. This is based on Graves's own later account, but it was painstakingly put together and should probably be trusted (ibid. 2: 570). One may find corroboration in the Admiralty's accounts. An Admiralty account dated 29 September listed twenty-two ships and sloops in North America, eleven others enroute, and eight fitting out to proceed (ibid. 2: 742-3).

20. David Syrett ("Fleet that Failed," note 6) has observed that Graves had a "mere handful of ships . . . to tackle the impossible task of supporting the British Army, protecting supply ships in American waters, and policing more than 1,000 miles of hostile coastline" (p. 69). But even Syrett has overstated the strength of the squadron at the end of 1775. The twenty-four additional ships which he mentions (p. 70) as being dispatched (presumably according to Admiralty accounts) during the year were not listed in Graves's disposition report of 3 December (*NDAR* 2: 1250) or Admiral Shuldham's of 15 January 1776 (ibid. 3: 794).

he did not yet, in late August, know the full truth. We may assume that he knew, from Palliser's plan, the requirements of covering the ports and estuaries, the extra ships needed to provide for periodic relief of the cruising ships, and the fact that 40 percent of the squadron was assigned to assist the army at Boston. He also knew that in early July the stationed ships were ordered by the cabinet to "receive on board . . . & to afford every reasonable accommodation" to governors and other colonial officials who might be compelled to seek asylum, to protect loyalists in the same manner, if possible, and to answer organized violence with violence in seaport towns. The wording was plain on the last point: ". . . it will be the duty of such Commander to proceed, by the most vigorous efforts, against the said Town, as in open Rebellion against the King."[21] What Sandwich did not know was the size of the burden of helping the army to find food and fodder; Graves had been carrying this burden for many weeks. In fact, it was mainly for this reason that Graves could not meet the requests of various royal governors who were asking for ships to be stationed in their vicinity to stop the surging colonial importation of powder and arms. He wrote to the Admiralty: ". . . their Lordships I trust are fully apprized that it is entirely out of my power to comply with any part of their Requests, until Reinforcements arrive from England."[22] Yet the Admiralty, like the ministry, awakened very slowly to how difficult it had suddenly become to provide food for the army at Boston. The Admiralty's letter of 3 August foresaw "a want of Fewell at Boston" but did not mention provisions, except to ask Graves how much he had on hand for the navy and how much he could "depend upon receiving from the Contractors."[23] This was a routine request, but it probably evoked words of one syllable when read in Boston because the customary system of victualling both warships and soldiers in America had almost entirely collapsed. Although the contractors' agents in America evidently wanted to carry on the business, their position was highly visible and they were intimidated by rebel threats and assaults. In some places, like New York and Norfolk, arrangements were worked out between the stationed ship's captain and the fence-sitting local authorities. Such arrangements allowed for no more than the ship's immediate needs; very few colonists wished or dared to make surplus food available for the British army.[24]

Back in London, people were inclined to think that it made no difference whether the army at Boston was supplied by purchases or by seizures. The change from the one to the other, however, imposed an enormous burden on the navy. Graves's force had to protect the Boston harbor islands (where livestock and fodder were available), to protect fish supplies in the Bay of Fundy, and to proceed as far as Long Island Sound in order to have a good chance of intercepting colonial shipments. Although his orders from the Admiralty made no specific mention of this mission, he gave it priority because General Gage urged him to do so. The first hint from home that provisioning the army was to be one of his primary concerns did not reach Graves until many weeks later.[25] How earnestly he pursued the business is a matter of dispute, but one thing is clear. In this situation it made much more sense to maintain reciprocal relations with the mainland wherever possible than to commence indiscriminate ravaging. Nonetheless, he and his captains were censured for their lack of ruthlessness. In any case, the need to perform auxiliary services for the army at Boston, both operationally and logistically, and the increasingly urgent requests of royal governors elsewhere for assistance and protection sharply curtailed his opportunities to station cruisers. At home Graves was criticized for not executing the Restraining Acts, but he was much more concerned about his failure to stop gunpowder shipments; the Restraining Acts had rightly fallen to the bottom of the admiral's list of priorities.[26]

In mid-September the government decided to recall Admiral Graves. (Since his relief, Admiral Molyneux Shuldham, and the letter of recall did not arrive at Boston until the end of December, Graves remained in charge of the squadron for the rest of 1775, ignorant of the fact that he had been replaced.) He was recalled under fire, amidst a "torrent" of criticism that, Lord Sandwich told him, was

21. The Admiralty forwarded orders to this effect on 6 July; *NDAR* 1: 1317.

22. *NDAR* 1: 1002, 29 July 1775. It is highly probable that some governors may also have been thinking of their personal safety, because they were conveying their anxieties to Lord Dartmouth. See B. D. Bargar, *Lord Dartmouth and the American Revolution* (Columbia, SC, 1965), 173-5.

23. *NDAR* 1: 1347-50.

24. The British hit upon an effective subterfuge. Loyalist merchants loaded vessels at Norfolk or New York with provisions ostensibly destined for the West Indies while simultaneously arrangements were made to have them intercepted at sea by the navy and taken to Boston. See ibid. 1: 550, 691, 711, 913.

25. *Sandwich Papers* 1: 67.

26. Some historical accounts have given prominence to certain legal flaws which got in the way of enforcing the Restraining Acts. Professor Gerald S. Graham (*Empire of the North Atlantic* [Toronto, 1950], 194-5) believed that this was a serious problem. Perhaps the problem occasionally inhibited the capture of food supplies, but there is evidence that Graves's commanders (by his instruction) paid no attention to proper papers when it came to food for the army. Quite possibly the most annoying effect was to reduce the quantity of prize money to officers and crews.

"too strong for me to be able to withstand it."[27] Graves seems to have been a difficult man and a poor leader, and though he was not so professionally incompetent and lacking in initiative as his detractors supposed, perhaps it was wise to replace him. But the "torrent" of criticism permanently ruined his career.[28] The nature of the accusations, and the manner and circumstances in which his disgrace was handled, exhibit early symptoms of the poison that was creeping into naval politics.

The chief charge against Graves was that he was too mild in his treatment of the Americans. After Bunker Hill the army had been bottled up without much to think about except where its next meal was coming from. In September some of the generals were back home from Boston (Gage had already been recalled). They found it convenient to blame Graves and the navy for the logistical uncertainties that had led to their inaction, asserting that his ships could have easily forced the rebels to disgorge food supplies by entering any port and "laying the towns in ashes that refuse[d] his terms." This phrase, from a particularly bellicose letter written by John Burgoyne, showed up in the Earl of Rochford's letter to Sandwich of 8 September, by which the First Lord was informed that the king did not see how the command could "any longer be left in such improper hands." On 12 September the cabinet ordered the Admiralty to instruct Graves to send armed ships to rebel ports "to demand of the Inhabitants of the Maritime Towns, that they do furnish, at a reasonable price" provisions for the fleet and army, and if refused, to "proceed hostilely against such Towns as in open Rebellion." The Admiralty sent these instructions two days later. These official letters were drafted during the week in which it was decided to recall the admiral.[29] Harsh measures seemed to command popular support.[30] The king and his ministers were also looking apprehensively toward the next meeting of Parliament, because the decision for a large and expensive military escalation had been reached while Parliament was not in session — Parliament did not sit from 26 May to 26 October 1775 — and the conduct of affairs in America had obviously not gone well.[31] Unable to defend himself from afar, Graves was clearly well positioned to be a scapegoat, and failure to pursue a hard line was not only an uncomplicated accusation to make but was also perfectly in tune with the disposition of the ascendant party in the government: aggressiveness toward the Americans was now the litmus test of correct political views.

When Sandwich conveyed the news of dismissal to Graves in a private letter, he wrote:

> You may however be assured that I shall in every place, both public and private, do you the justice you deserve, and declare my opinion that it has been more owing to accident than to misconduct that the operations of the fleet this summer have not carried that importance with them that the nation expected.[32]

The use of the word "accident" was ominous. Graves's reputation could only be salvaged by a clear statement from the Admiralty that public expectations ran far beyond what could have been done with the forces he had. Although the First Lord did continue to defend Graves in general terms — in fact, he threw some of the blame back onto the army — he gave no specifics about available ships. Upon his return from America, Graves requested a trial in order to "justify his conduct to the publick," but the Admiralty Lords responded that "they accused him of no neglect whatever, & therefore could not order him to be tried."[33] This formula, true enough as far as it went, left Graves's public reputation in ruins while saving the Admiralty from having its tardiness in mobilizing frigates from being exposed in detail.

Nevertheless, when Parliament met in late October the First Lord could not avoid discussing the state of the naval forces in America. He could not deny their insufficiency. He explained it by saying that the "administration had been deceived in some measure" during the past months — meaning, evidently, that the cabinet had miscalculated the pervasiveness and power of the American rebellion. While expressing his "own private opinion" that a stronger navy was very much wanted, he implied that he had earlier been dissuaded from insisting on this by his ministerial colleagues for political reasons: ". . . if a larger force had been demanded, it would have raised an opposition to the measures at large." But now, he continued, "things were much altered" and "it was necessary to considerably augment our navy; . . . he had already taken every precaution in his power; . . . twenty [more ships] were actually sailed, or were ready to sail to reinforce" the American squadron. He then offered a large pledge, namely that:

27. Sandwich to Graves, 17 September 1775, *Sandwich Papers* 1: 74.

28. Despite his continued allegiance to Lord Sandwich, and Sandwich's promises to do him justice, Graves was blocked from obtaining a suitable command at sea thereafter.

29. Quoted by French, *First Year*, 357; also *Sandwich Papers* 1: 72-3; *NDAR* 2: 712-3, 716.

30. E.g. William Eden to Germain, 3 October 1775, HMC, *Stopford-Sackville* 2: 10.

31. On 10 September, George III wrote to Lord North: "I am fighting the Battle of the Legislature," by which he meant he was lining up parliamentary support for the administration. See Fortescue, *Correspondence* 3: 256.

32. *Sandwich Papers* 1: 73-4.

33. *NDAR* 4: 947.

> . . . it was the intention of the administration to complete the number, by the time operations were to commence, to seventy vessels, which would be such a force co-operating with the army, as would render it impossible for the Americans either to resist, keep together, or subsist; as they would have at once all the calamities of a war to contend with, without the means of carrying it on; being thus cut off from all supplies they might expect to derive from Europe, or elsewhere.[34]

This is an interesting speech. It contains an acknowledgement that earlier in the year naval augmentation had been deferred lest it provoke "an opposition to the measures at large."[35] Blame was thus transferred from the Admiralty to the ministry, and Parliament was given the impression that everyone in government had awakened to naval needs and that a project of naval reinforcement was now well in hand. In this manner Sandwich buried the fact that the frigates which were now "ready to sail" had been ordered by the cabinet in June and July. He also spoke of having a large force in America "by the time operations were to commence." But what could this mean? Clearly, if the aim was to cut off munitions, operations had already commenced; the importance of guarding every ice-free American port quickly, and throughout the winter if possible, was beyond dispute.

It cannot have escaped the reader's notice that the speech also contains remarks about intended strategy. A force of seventy ships would be large enough, said the First Lord, to enable Britain to deny external supplies to the Americans as well as cooperate with the army. This suggests that Sandwich still had in mind a strategy in which maritime and military objectives would be pursued concurrently, and there is corroborative evidence. At about this same time Palliser, Sandwich's leading naval advisor on the board, prepared for him a memorandum about cruisers. Palliser calculated that there were still twenty laid-up frigates "in good condition" in addition to those currently being fitted out and suggested that the additional twenty "should be taken in hand successively." This would bring the squadron to about seventy cruisers. He realized that when these cruisers were first deployed they would escort troop transports across the Atlantic, but he assumed that soon afterwards they would be employed in cruising on the American coast. As a result, the squadron would be able to keep fifty to sixty ships "constantly on stations."[36] It thus appears that in October 1775 the Admiralty was thinking of mounting a substantial American coastal blockade during 1776. There is further evidence. In January 1776, George III, noting that "every intelligence" pointed to the Dutch West Indian island of "St. Eustacia as the Port from whence the Americans hope in the course of the Winter to obtain Gun Powder," urged Lord Sandwich to adopt "every means of obtaining many Vessels" suitable for cruising: "between that place and N. America we ought to cover the Sea with Vessels to disappoint them in this essential article for carrying on the next campaign."[37] On 18 April, the Admiralty urged Admiral Shuldham to prevent rebel American vessels from setting forth "to barter for Arms and Ammunition." This letter included the comment: ". . . putting a Stop to this intercourse is of the first importance."[38] All this makes one wonder whether the Admiralty, when it considered the coming year's operations, was deceiving Parliament or deceiving itself. Did the Board of Admiralty, let alone the administration or Parliament, really understand the level of force which a dual strategy would require?

When Admiral Shuldham took up the command at Boston in early January 1776, he tried as hard as he could to explain the situation. Writing to the Admiralty, he praised his officers for "constantly keeping the sea on their respective Stations" during the severe weather, terming their performance "unprecedented and incredible," but he made it clear that he did not have enough ships for what he took to be his primary missions: ". . . to Co-operate with the Army, Cruize off the Ports of the Rebels to prevent their receiving Supplies, or protect those destined to this place from falling into their hands."[39] He continued unceasingly to plead for more ships.[40] In mid-April, after insuring the safe convoy of a vast number of troops and loyalists from Boston to Halifax, he replied to Admiralty

34. William Cobbett, ed., *Parliamentary History of England . . . 1066 to . . . 1803*, 36 vols. (London, 1806-1820) [hereafter cited as *Parl. Hist.*], 18: 712, 26 October 1775.

35. The Earl of Shelburne noticed the political confession: "The insufficiency of the navy was concealed from parliament and [also, he thought] part of the administration from a fear of not receiving support" (ibid., 729).

36. *Sandwich Papers* 1: 76-7. Palliser allowed for ten or twelve at a time to be "absent refitting, employed on convoys and dispatches." This would still leave fifty or sixty on stations. The editors of the published document dated this (apparently undated) memorandum "December 1775," but I believe it to have been written in October, probably to help prepare the First Lord for Parliament. My reasons are that it refers to the expedition to the southern provinces as not yet firmly decided upon and that its last paragraph reads as if its author had no knowledge of the Prohibitory Act.

37. Fortescue, *Correspondence* 3: 332, 11 January 1776. This quotes the king's original draft; the version Sandwich received was blander and more carefully worded (*Sandwich Papers* 1: 103).

38. *NDAR* 4: 1049.

39. Robert W. Neeser, ed., *The Despatches of Molyneux Shuldham* (New York: Naval Historical Society, 1913), 38-9, 76-7.

40. The instances are too numerous to cite; it should also be remembered that some crews of the cruising ships were sickly, while others had to protect royal governors (see, for example, ibid., 143-4).

suggestions that he detach ships for certain special services by saying that it was impossible. With a trace of vehemence he added that since January only two ships had come to his squadron from England.[41] Their Lordships knew how few ships they had actually added thus far to the American squadron: an Admiralty account dated 4 May listed Shuldham with thirty-two ships, plus six schooners and two armed vessels. Therefore, "to cover the Sea with Vessels" (as George III urged) the admiral had scarcely more at hand than his predecessor had had eleven months earlier. In this same account, eighteen more ships were listed as having sailed for North America and another seven were listed as under orders "to proceed forthwith"; they would bring the total strength of ships and sloops to fifty-seven.[42] They began to arrive in June.

The prolonged lack of cruisers in America is partly to be explained by administrative failures in England — by the late start and by some unusual pressures and difficulties which rapidly built up in the dockyards. This aspect will be discussed in a concluding section. Here we should take note of an operational point: the employment of the frigates and sloops of war when their fitting out was completed was markedly affected by the proliferation of military expeditions which set forth in 1776. Of the twenty-five ships designated to augment the North American squadron in the spring of 1776, seven were attached to the southern expedition (focused on the Carolinas), eight bound for Quebec, and seven destined for New York. Only three were assigned to Boston and available immediately for cruising.[43] Even more important, Palliser's assumption in October that the warships would quickly be released for cruising services did not hold, because all the major campaigns of 1776 — Charleston, Quebec, the Lakes, and New York — were truly combined operations, requiring a considerable naval force to be concentrated at the site for cannonading as well as ferrying troops, artillery, and supplies.

Of the forty-eight vessels under Shuldham's direction (a figure which includes armed brigs and schooners) in early July, only seventeen, possibly only thirteen, were employed on cruising and watching ports. Most of the rest were performing tasks related to military needs. With so thin a force to watch the whole coastline, there were bound to be serious lapses.[44] Two such lapses had already gotten the attention of high authority back home, namely, the failure to meet incoming troop transports off Boston (after it was abandoned by the army) and redirect them to Halifax, and the failure to maintain surveillance of the mouth of the Delaware. George III and Germain demanded an inquiry into the causes of these failures.

But whatever frustrations they felt, and whatever the Admiralty might have said in April about "the first importance" of severing American sea communications, this objective was consistently subordinated to military operations. In mid-August, when all the ships designated for America in 1776 had finally arrived, the capability for cruising and blockading became theoretically impressive, but the pattern continued — indeed, at this point the allocation of naval forces to military services ascended to the highest pitch — because the greatest combined operation of the war then began: the campaign in New York Harbor.

The Conduct of Admiral Lord Howe

Richard, Lord Howe arrived at Staten Island with reinforcements and took over command of the North American squadron in early July 1776. The administration had been determined to appoint Howe (if he would accept) before any news of Shuldham's performance reached London, so Shuldham's dismissal implied no censure. There was no doubt in Lord Howe's mind that his primary strategic mission was to assist the military operations of his brother, General Sir William Howe, the commander in chief of the army in America. In this he succeeded. Although the assault at New York got started late, it was one of the largest, most complicated, and most harmoniously executed combined operations ever accomplished. Because of the manner in which the British used their domination of the waterways to move troops and heavy firepower, it really deserves to be known as the New York Harbor campaign, rather than as a series of battles (Long Island, White Plains, Fort Washington). One benefit that the North administration clearly gained by appointing two

41. Shuldham to Admiralty, 16 April 1776, *NDAR* 4: 843. At the same time the Admiralty was drafting a letter in which their Lordships expressed "great hopes from the Number of Ships and small vessels" under his command that Shuldham would be able to stop the barter trade for munitions (ibid. 4: 1049). By 24 May four more ships had arrived, bringing his total of ships and sloops to thirty-three (ibid. 5: 228-30).

42. Ibid. 4: 1090-2. The total force, including all armed vessels but excluding storeships, hospital ships, bomb vessels, and fire ships would then be sixty-eight.

43. Ibid. 4: 1090-2, 4 May 1776.

44. A sample of the assignments of the rest: eight protecting the army's position and sustenance at Staten Island; five waiting off Cape Fear to safeguard the incoming transports of the southern expedition; four defending the coast of Nova Scotia and the base at Halifax; one carrying dispatches to Halifax; one convoying a cavalry unit from Halifax to Staten Island; one taking money to the garrison at St. Augustine; one in the Chesapeake Bay sheltering the governor of Virginia and his entourage; one at Bermuda protecting the ordnance stores and guns there (*NDAR* 5: 948-50). I have excluded the eight ships and armed vessels in the St. Lawrence River, which were formally under Shuldham's command but effectively beyond his reach.

View of the Narrows from Staten Island, with Lord Howe's fleet coming in, 12 July 1776, by Archibald Robertson, ca. 1776. Photo courtesy of the New York Public Library.

brothers as commanders in chief was close cooperation between the land and sea services.[45]

A side effect was that there were practically no cruisers watching other ports while it was going on. To a large extent this would have resulted regardless of the added bond of brotherhood, but Lord Howe carried the emphasis to an extreme. Of the squadron's forty-seven ships and sloops of war, twenty-four were in the New York area on 18 September; the Delaware and Chesapeake bays were left with nothing. By November practically the whole coast below New Jersey was without cover. During the military campaign (from August to December), the only ship sent away from New York was for the purpose of protecting the naval base at Halifax.[46]

On 7 November Ambrose Serle, who was with the flagship in New York harbor, wrote:

> We have heard of the Capture of many of our trading Vessels; and some of our Ships are gone and others are preparing to get out, in order to prevent further Depredations of the Rebels by Sea. Many Ships can now be spared from the Service here, which could not have been spared before; for their Complements of Seamen have been of most essential Service in conveying the Troops backward and forward over the large Inlets of Water, which abound near New York, and which it was necessary to pass and repass to come at the enemy.[47]

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45. The story is fairly well known, but it is curious that Eric Robson missed the significance of the New York campaign as a combined operation, particularly since he considered lack of cooperation between military and naval commanders to be a primary reason why combined operations so often failed (*American Revolution*, 145). The navy's role may be fully appreciated in Lord Howe's report (*NDAR* 7: 254-6, 23 November 1776).

46. *NDAR* 6: 891-4, 1157. Professor Gruber (*Howe Brothers*, 136) has analyzed figures from a November disposition report, not printed in *NDAR*. Where his figures differ from mine, the cause is a difference of method. He counted the vessels in the St. Lawrence. He also counted all vessels, including the small armed vessels and non-combatant ones. Without doubt, armed brigs and schooners which were locally obtained and armed were indispensable auxiliaries for blockading and other purposes, but they could not hold station for long without frigates and sloops in attendance. My focus, however, is on those larger cruisers, which had to be supplied from England.

47. Serle to Lord Dartmouth, in a private letter, *NDAR* 7: 79.

On 5 December Captain Andrew Snape Hamond sailed from New York with five ships under his command to operate in the Delaware, arriving there on the 7th. Two ships were supposed to sail immediately to the Chesapeake but were briefly detained for repairs.[48] Actually, the campaigning season was not completely over. An expedition under General Sir Henry Clinton and Commodore Sir Peter Parker was successful in securing Newport in early December. By 11 December all the islands and approaches of Narragansett Bay were under British control: rebel ships of war which had been fitting out fled up the bay to Providence, where they remained bottled up.[49]

Following the capture of Newport, Lord Howe was in a position to deploy a considerable portion of his naval force for cruising, and he did so. For this purpose he divided the North American squadron into three commands. Howe retained direct responsibility for the coast from New London to Cape May. Commodore William Hotham was assigned the long stretch from Cape May to Florida; he was told to pay particular attention to Delaware Bay (where Captain Hamond had already gone). Commodore Parker was responsible for the coast east and north of New London.[50]

In terms of percentage of ships assigned, the winter blockade of 1776-7 seems impressive only by comparison with earlier performance. Less than half of Howe's cruisers were placed on station.[51] Yet the results on the Middle Atlantic seaboard were tremendous. New York and Newport were, of course, in British hands. Hamond's flotilla choked off the Delaware from early December to nearly the end of January.[52] The Chesapeake appears to have been so tightly guarded (from 23 January to mid-May and perhaps longer) that in early February the port of Baltimore laid an embargo on outbound shipping to prevent further losses.[53] Patrick Henry wrote from Williamsburg, Virginia to a fellow revolutionary governor on 25 April: "Two British Ships of War have long infested the Trade of this Commonwealth. Their usual Station is near our Capes. . . . The Number of Prizes taken by them is great & the Damage to our Trade excessive."[54]

The difficult situation in which this winter blockade placed the American cause is set forth in letters written by Robert Morris from Philadelphia in December and January. In a long letter of 20 December to Silas Deane, the American commercial representative in France, Morris surveyed a scene that left "no room for joy": not only did the British army appear to threaten Philadelphia, but also the Continental currency was near ruin and the Continental Navy was either stalled by lack of guns, anchors, and seamen or by being blocked up by British naval forces. Moreover, there was a mismatch in the locations of goods to be exported and vessels to carry them which could scarcely be remedied while "the cruizers . . . are constantly all along the Coast," making it "dangerous to send Vessels from one Port to another." His general assessment: ". . . we are Surrounded by Difficulties in our Land & Sea Service & in our Commerce." In particular he was pondering the warships then arming at Philadelphia. Should they go down river (where British men-of-war were waiting) or remain in Philadelphia, which might be soon overrun by the British army? After Washington's raid on Trenton he decided that the risks of putting ships to sea were "not worth running": the British warships were so "very thick" that "Capt Biddle cannot possibly get past them."

Not only were American fighting ships bottled up, but so was American trade: "As things are now circumstanced the chance of getting out Merchant Ships is against us." This raised an immediate problem of war finance. To be sure, the British could not completely cut off gunpowder imports, but how could military supplies be paid for without American exports? An immediate solution was to order American armed vessels in the Caribbean to sell the British prizes they took at French colonial ports there. On 11 January Robert Morris considered the problem more broadly, and his conclusions were morose. Because it was so dangerous and difficult to ship American goods, he could see no prospect of an early improvement of external finances: ". . . our Ports were shut the greatest part of the Summer & now again when we expected them certainly to be open, the Enemy are Cruizing at the mouths of our Bays and along the Coast with more industry than ever." The "Eastern States" (New England) had practically nothing to send to Europe that would find a market, and in the mid-Atlantic states "our Trade was obliged to be

48. Ibid. 7: 460-1, 665-6.

49. Ibid. 7: 256-62, 446.

50. Ibid. 7: 552-7, 569-74, 22-3 December 1776.

51. It is not possible to state a precise number of ships assigned, because some were to take time out for refitting in the Caribbean, but one could begin by consulting Howe's disposition report of 15 January 1777 (ibid. 7: 954).

52. Ibid. 7: 496-7, 505, 514-5, 534-5, 544, 578, 836-7, 854, 986, 1048.

53. Ibid. 7: 1033, 1047, 1096-7, 1160, 1307, and 8: 27, 37, 306, 963-4. Professor Gruber (*Howe Brothers*, 203, 264) used a ratio of the number of ships employed in cruising to the number of vessels captured as a measure of the effectiveness of commerce warfare. In this as in most cases, however, such a measure is of practically no importance. The strategic object — laying aside the interests of the captors — is to interdict enemy sea communications: blockading operations achieve their main objective by deterrence; that is, by discouraging vessels from sailing. Captures are a bonus. There is, of course, a mountain of evidence on this point, from many wars; some examples may be seen in Dudley, "Maryland at War on the Chesapeake," 105, 107, 110, 115.

54. *NDAR* 8: 431.

The British landing on Rhode Island, 9 December 1776, is depicted in this watercolor by Robert Cleveley, 1777. Photo courtesy of the National Maritime Museum, London.

carried on in small Vessels & these were hardly sufficient to pay for the necessarys we imported from the West Indies." As for the ports southward of Philadelphia:

> . . . in Maryland & Virginia we [the committee of the Continental Congress] have been buying much Tobacco & as fast as Vessels cou'd be got to carry it to market they have been sent off but they are very scarce in all the States to the Southward of this, and Seamen, Cordage, Canvass, & other materials still more scarce; to send them from one part of the Coast to another was extreamly Hazardous whilst our Enemies Cruizers covered the Seas in their very track.

One solution was to charter ships in New England to go in ballast to the southern states and hope that they might get there safely, which was "very doubtfull." In short, the naval problem looked insoluble. It was therefore absolutely necessary to obtain French assistance (a "few Line of Battle ships"). He asked Deane to press for this. If the French agreed, he added, it would be a very good speculation to send cargoes of salt to America in return for tobacco, "but if no fleet, send no Ships."[55]

Admittedly Morris exaggerated, particularly when he referred to the ports being "shut the greatest part of the Summer." The blockade of the Delaware and Chesapeake bays had not lasted all summer, and the ports were substantially unguarded during the autumn. (He was trying to enable Deane to put the best face on efforts to get increased French aid.) Still, in the early months of 1777 the situation looked very bad. Washington's success at Trenton kept American hopes alive, but the financial prospect was grim. The winter blockade created a desperate case for French financial assistance. It was soon granted in the form of a large loan. Still, exports were needed to pay interest or the French might tire of making loans, and, as Morris remarked to Deane, it did not seem a good gamble to ship cargoes without French naval protection. As it happened, the French did not provide that for another year.[56]

At the end of January shafts of light began to penetrate the gloom in Philadelphia. The news came that Captain Hamond's flotilla had left the mouth of the Delaware (they actually departed sometime between the 10th and 14th) and that the river was fortunately "nearly clear of Ice." A month later Morris could report that some ships had "lately got away" from Philadelphia, and he sounded more encouraging about bringing cargoes into the Delaware: "I dont think we have lost above a fourth or at most a third of the inward bound Vessells." In February the

55. Ibid. 7: 528-33, 574-6, 869-71, 929-31; letters dated 20 and 23 December 1776, 6 and 11 January 1777, the first and last addressed to Silas Deane, the other two to John Hancock.

56. Since the blockade's role in provoking American anxieties at this particular time was not marked by Jonathan R. Dull in his important book, *The French Navy and American Independence: A Study of Arms and Diplomacy, 1774-1781* (Princeton, 1975), attention should be called to the letters of the Committee of Secret Correspondence touching this subject and the responses of the American Commissioners in Paris. They are printed in *NDAR* 7: 548-9, 1087-8, 1238-9, and 8: 508, 671-2. The nature of the Americans' naval problem is spelled out in succinct detail in the Committee's letter of 2 February 1777 (ibid. 7: 1087).

Randolph, commanded by Nicholas Biddle, got to sea, the first American frigate to do so.[57] Although the Chesapeake remained covered, the Delaware stood unwatched until mid-March, and the British force there did not recover its December level of strength until the beginning of April when Hamond returned from refitting at Antigua.[58] Windows of opportunity such as the one opened for Philadelphia from late January to early March are damaging to any blockade, and it was an opening which Lord Howe's blockading plan risked because Hamond was ordered to break off and go to refit at Antigua during the winter. Howe no doubt hoped that river ice would do the flotilla's job while it was absent.

Besides the failure to keep a continuous watch in the Middle Atlantic region, there were more serious lapses elsewhere. Robert Morris did not have good information as to what was happening north of Newport or south of Norfolk. In fact, Boston, Charleston, and Savannah were mostly unwatched throughout the winter. New England may have lacked commodities for export but did not lack ships and sailors. American privateers and naval vessels surged forth from ports north of Cape Cod to fall upon British fishing and trading fleets everywhere. This was the first time American naval vessels got to sea in strength. Meanwhile, the only coverage below Cape Hatteras was provided briefly by Captain Hamond, who ordered two frigates to cruise off Charleston on their way from the Delaware to Antigua.[59] During most of the winter the southern ports were wide open; rebel privateers carried numerous prizes into Charleston, and the trade between there and the West Indies flourished.[60]

Why was the winter blockade so weak at the extremities? Mainly because of Howe's arrangements. His orders to Commodore Parker left no doubt that patrolling north of Cape Cod was secondary to guarding Narragansett Bay and the coastline near it. Parker may well have overdone this. He was deeply concerned, without justification in view of the military situation of the Americans, about a possible attack on the army's foothold at Newport. He also concentrated very heavily on the bay's passages. It appears that he did not send any ships north of Cape Cod. Lord Howe accepted all this with no more than a faint murmur. He reported to the Admiralty on 31 March:

> Different Extra Services for protecting Transports detached to procure Supplies of Fuel and Forage for the Troops at Rhode-Island, have prevented the Frigates from being employed on Cruizing Stations to the Extent proposed: . . . many Ships of different Classes, which it would be desirable to employ for other purposes, must now be necessarily detained for the Security of that important post.

In other words, the needs of an army took precedence — in this case, to a greater degree than the admiral had wished. But the lapses to the northward did not occur for this reason alone. Lord Howe had made no clear provision for blockading the eastern seaboard of New England, and he took no action when he learned that Parker would do nothing in that sphere.[61] Although his orders to Parker had mentioned a scheme for watching that coast whereby he should work in cooperation with Sir George Collier's cruisers, based on Halifax, no serious effort was made by any of them to implement such cooperation. As for thin coverage of the southern ports, Howe later explained to the Admiralty that two sloops which were supposed to have come away from Nova Scotia for that purpose somehow never did. There is reason to think that this excuse should not be taken at face value.[62]

The winter blockading effort of 1776-77 is important for two reasons. First, its achievement — which has escaped historical notice — is as significant as its defects.

57. *NDAR* 7: 1052, 1064, 1229, 1307. The *Randolph* was soon hit by hard weather and had to limp into Charleston (ibid. 8: 88).

58. Hamond's orders from Howe had called for his return to the Delaware by 1 March, but he had left it later than anticipated and his refit in English Harbor (Antigua) was delayed by shortages of artificers there *(NDAR* 8: 295, 8 April 1777). Commodore Hotham attempted to enter Delaware Bay on 17 February but was blown off by severe weather and did not get there until 11 March (ibid., 233). One must bear in mind that even good coverage, as in the Chesapeake, could not entirely prevent small vessels from getting out, and vessels of all sizes from getting in; there was always the element of luck in which weather was the main factor. For example, a considerable supply of powder managed to get to Maryland in March (ibid., 243).

59. *Perseus* and *Camilla;* they were off South Carolina for only three weeks, but they took some rich prizes (see *NDAR* 7: 1029, 1048, and 8: 150).

60. It was remarked in early April that "all Kinds of West India Goods" were selling in Charleston at low prices (ibid. 8: 114, 279, 282). Later on, in April the frigate *Galatea* was placed on this station (ibid. 8: 395, 432-3). It appears that Savannah was also wide open, but the evidence I have found on Savannah is sketchy.

61. See *NDAR* 8: 232 for Howe's 31 March letter to the Admiralty. For his correspondence with Parker, see ibid. 7: 555, 923-4, 1026-7, 1069. Howe told Parker that he did not think a rebel military attack on Newport at all likely and perhaps implied thereby that more of the ships should be cruising, but he did not discourage Parker from mounting defenses. Moreover, Howe was well aware that his orders spoke of the coasts near Boston as a secondary mission for Parker while at the same time specifying that any frigates sent there should operate in pairs because of the chance of meeting rebel warships.

62. *Hunter* and *Vulture;* see *NDAR* 7: 883 and 8: 233-4, especially Howe's letter to the Admiralty of 31 March 1777 (ibid. 8: 233-4). Sending these ships south was not mentioned in Howe's report of plans on 12 December (ibid. 7: 460-2), nor did his disposition report of 15 January 1777 (ibid. 7: 965) indicate any such destination for them. Howe's instructions to Hotham indicated that he was not expected to extend his "Care further Southward" until he had a "sufficient number" of ships (ibid. 7: 572).

In spite of its flaws and brevity, the winter blockade seriously disturbed colonial shipping movements and made a deep impression on the Americans. It highlights the importance of French loans and points to the eventual importance of French naval assistance. Second, aside from accidents of weather and the failure to block up even the primary ports north of Cape Cod, its flaws were the consequence of military priorities and insufficiency of ships. It is evident that Lord Howe wanted to impose as strong a blockade as he could, but only with ships that remained after military and refitting needs were looked after, and his eye was very much on the next campaigning season.

The pattern of naval operations in America in 1777 was essentially similar to that of 1776. There were some differences, however. During the spring, with more ships available, surveillance of the coast was more comprehensive. And although from mid-July to late November a large combined operation — this one aimed at Philadelphia — again took cruisers off station, the key locations from Newport to the Chesapeake continued to be covered in some degree. Another change was that in 1777 Howe's orders to ships assigned to blockading emphasized the commercial-financial objective of "preventing the Export of the American Produce to France." This, he told the Admiralty, "appears to be a capital Object of the Enemy's Attention and Dependance. The Number of Captures will be less, but the Benefits greater."[63] But once again the army's main operation took a long time. One of the great drawbacks of the Howes' plan to capture Philadelphia was that, by calling for moving the army by sea, it kept the bulk of both naval and military forces tied up and essentially out of play for many weeks as the convoyed transports battled (predictable) summer headwinds on their way southward from New York. When Philadelphia was secured and the Delaware River finally cleared of obstructions, the admiral once again attempted a maritime blockade. This time, however, he pointedly warned London not to have any great expectations — as if to imply that this winter's blockade was likely to produce worse lapses and fewer successes than the one a year before. The tone of his letter of 10 December was very defensive; he covered every reason, large and small, why his blockading measures had been and would continue to be unsatisfactory.[64]

Lord Howe's worries were understandable. He knew that the government in London had become increasingly interested in maritime aspects of the war during 1777, for reasons that were both strategic and political. The shift in strategic ideas came late in the year and will be looked at in a moment. The political factor arose earlier, chiefly because of the British public's painful realization that American privateers were swarming upon the seas and assaulting British shipping everywhere.

The privateers began to emerge, mostly from New England's eastern ports, during the winter of 1776-77, but contrary winds had prevented the news from reaching England. Suddenly in late April reports of captures of British vessels on the American coast and in the Caribbean poured in and were played up by the press. This surge of bad news was followed in early summer by the arrival of some American privateers off the coasts of Great Britain. As a result, the positive achievements of Lord Howe's winter blockade were totally obscured. All that mattered now was that no care had been taken to obstruct American maritime enterprise north of Cape Cod. It would not have been easy to contain those privateers, but Howe's forces had done scarcely anything at all on that coast (as we have seen), and he could not blame this particular failure on some immediate need to support the army.[65]

Suddenly, then, naval failure became a prime focus of public attention. The public always expected a great deal of the navy, and the promises originally offered by Lord Sandwich were now seen to be worthless. The government did what it could to limit the political damage. It rushed to Lloyd's an official report that British warships had taken 140 rebel vessels and recaptured twenty-six others. It took emergency measures to assign whatever ships could be found to cruising and convoy duties in the Channel.[66] The trouble was that practically all the frigates were in America, so the British navy was forced to employ heavy ships of the line on cruising assignments, for which they were egregiously unsuitable.[67] The government tried through diplomatic channels to get neutral France to prohibit the American privateers from using French ports as bases. But France was playing a double game for high stakes, and the Americans were able to sell their prizes, buy provisions and ammunition, and at times

63. Lord Howe to Admiralty, 5 June 1777, *NDAR* 9: 25. Preventing tobacco exports was particularly important (ibid., 9: 952).

64. Lord Howe's letter to the Admiralty of 10 December 1777 is summarized by Syrett, *Royal Navy*, 87.

65. Professor Syrett has offered the opinion that the failure to prevent the Americans from putting privateers to sea in 1776 was as important as the failure to corner Washington's army ("Fleet that Failed," 75). I suspect that, given the nature of the weather and the speed of a freshly prepared privateering vessel, the task of containing the privateers would have required a nearby base or two, defended by ships and soldiers, and a very close blockade. On that coast in the winter and spring, normal patrolling offshore would scarcely have done the job. Still, the fact that nothing at all was attempted was a huge embarrassment.

66. See *NDAR* 8: 762-4, 835-47; *Sandwich Papers* 1: 224-5.

67. *Sandwich Papers* 1: 201-2.

This 1785 oil by Francis Holman depicts an English brig with four captured American vessels. Sporadic captures like this were usually insufficient to deter American vessels from sailing. Photo courtesy of the National Maritime Museum, London.

even recruit sailors in French ports without serious interference.[68]

The shift in the government's strategic thinking during the autumn of 1777 is detectable in Lord George Germain's diminished single-mindedness and Lord North's new attention to the maritime aspect of affairs. During most of 1777, despite the accumulating news of maritime failure in America, Germain never suggested that forces should be devoted to a tighter blockade. Privately he would make sour little jokes to friends about Howe's failure to police the sea-lanes, as he did in June: "Lord Howe is the most disinterested man I know, in permitting the trade of Charlestown to be carry'd on without interruption, when he might avail himself of so many rich prizes."[69] But he wrote nothing along these lines in his letters either to the Admiralty or to Lord Howe. It seems clear that he wanted the admiral to do what the admiral was doing: concentrate on assisting the army. By early August, however, Germain was getting a glimpse of how slowly the military campaign was unfolding. He began to alternate between hope and despair as to whether a decisive blow would in fact be delivered in 1777. He still hoped, and therefore adhered to the strategy, but other considerations were crowding in upon his mind. As for the prime minister, he was impressed by the growing significance of French assistance to the rebellion, and the value of having it contained. On 28 October, Lord North wrote a long letter directly to the admiral, commenting on how effective his cruisers had been in curtailing tobacco exports and telling him how vital it was that he should not only continue to do that, but also to intercept the huge shipments of war supplies now being readied in French and Spanish ports.[70]

Thus, even before London had news of Burgoyne's disaster at Saratoga, the Howe brothers could sense a shift in the focus of the government's concerns that did not bode well for them. First the general and then the admiral made overtures to resign. Although the admiral's proposal to resign in late November 1777 was on grounds of ill health, that was a standard formula for side-stepping the issues. The brothers well knew that the year's catalog of delays and failures, on land and sea, had put their public

68. In a general way, the availability of French and other European ports to American marauders is well known; still, Lord Stormont's long letter from Paris of 9 July 1777 is interesting and is printed in *NDAR* 9: 478-81.

69. HMC, *Manuscripts in Various Collections* (1909), 6: 131, Germain to William Knox, 15 June 1777. Germain had in mind the fact that the commander in chief was entitled to one-eighth of the condemned value of all captures made by ships under his command.

70. Samuel F. Bemis, "Secret Intelligence, 1777: Two Documents," *Huntington Library Quarterly* 24 (1960-1): 233-41; Gruber, *Howe Brothers*, 272.

reputations in a bad light. Neither trusted Germain and he did not trust them; that had been the case for a long time. The faintest hint of criticism or loss of support was magnified by their anxieties. It is true that when the admiral did actually resign the following year the immediate reason was his desire to stand by his brother, who had by then resigned and was under heavy political fire.[71] But it is important to remember that Lord Howe himself was under a cloud for the very reason that the poor performance at sea was now very much in the public eye. The swarming privateers could be readily blamed on him. To be sure, he did not have nearly enough ships to conduct a dual strategy — would the Admiralty grant that point publicly? On the other hand, his arrangements for watching eastern New England presented every sign of carelessness. It would be easy for the government to make him a scapegoat. The Admiralty might soon find it convenient to misrepresent the significance of the orders he had been given, and the thrust of its expectations. Lord Howe did not trust Lord Sandwich any more than he trusted Germain; that too had been the case for a long time.

Lord Sandwich, Lord Howe, and the Question of Priorities

The most detailed scholarly study of the admiral's conduct has done what Howe feared Sandwich might do; it has neglected to put the Admiralty's orders in context and has therefore misrepresented the First Lord's expectations. It includes a specific charge that the admiral deliberately deviated from his orders by employing his fleet in a manner disapproved by the Admiralty, and it reaches the conclusion that Lord Howe sought to deceive his superiors as to his true intentions. Its seminal error resides in assuming that, under Lord Sandwich, the "Admiralty was especially eager to establish a tight blockade."[72]

One point should be established at the outset. A naval historian does not need to look at a single document to know that the Admiralty would have liked to establish an efficient blockade of the American coast. By this means the navy would have forfended against a myriad of maritime perplexities and potential avenues of public criticism. In that sense it may be presumed that the Admiralty under Lord Sandwich was — as any Board of Admiralty would have been — "eager" to establish a blockade. But Sandwich was not in an independent position to set either the naval budget or naval priorities; these were determined by the leading ministers of state, in consultation with him. The First Lord would have acted improperly if he had issued orders or censures which ran contrary to the administration's strategic wishes.

In the account that follows it will be evident that Lord Sandwich adhered to the government's priorities. Knowing that its primary concern was to have the navy assist the army, he never willingly issued a word of criticism, official or unofficial, to his admirals in America about their blockading and cruising performances during the first three years of the war. His Board of Admiralty instituted the inquiries into Shuldham's failures only under pressure from above and with reluctance.[73] As for Lord Howe, the Admiralty never asked him, as it had occasionally asked Graves and Shuldham, to regard cruising as a matter of "the first importance."

Even in its original, basic orders to Howe, dated 4 May 1776, the Admiralty never specified that he should try to mount a constant blockade. These orders did instruct him to employ his ships "from time to time in such manner as you shall judge most proper for preventing all Trade and Intercourse with the Colonies"; indeed, it is inconceivable that enforcement of the Prohibitory Act could have been omitted in the admiral's official instructions. But in the same sentence, and with equal emphasis, Howe was also ordered to employ his ships for "quelling the Rebellion. . . ; co-operating with the Commander in Chief of His Majesty's Land Forces [his brother] in the most vigorous execution of such Measures as shall be judged most advisable to be taken to attain these great objects."[74] The question as to which of the objects should be given priority was left open.

It was left open under sensitive circumstances. The British public (especially in the eighteenth century) was always alert on the issue of command of the seas. The press readily took it up on the slightest pretext. The strategic plan adopted in autumn 1775 therefore placed both Lord Sandwich and Lord Howe in an awkward position. On the one hand, they both approved the strategy of bringing the rebellion to a quick end by striking a decisive military blow. On the other hand, they could anticipate a popular uproar if the navy failed to protect British trade and permitted American commerce and privateering to flourish. The admiral was eager to work alongside his brother, both as conqueror and peacemaker. Although he and Germain had tussled for months over pacification policy, Lord Howe knew that he would have Germain's support and blessing if he chose wholeheartedly to assist military operations. In other words, he knew full

71. Mackesy, *War for America*, 219.
72. Gruber, *Howe Brothers*, passim, quotation p. 80.
73. Sir Hugh Palliser did not like it at all; see *Sandwich Papers* 1: 155.
74. Public Record Office, Adm 2/1332, ff 130-4. (The document is unfortunately not printed in *NDAR*.)

Admiral Richard, Viscount Howe, (ca. 1778), commander in chief of British naval forces in America. Photo courtesy of the National Maritime Museum, London.

well which of the "great objects" would be his primary task. There can be no doubting that Sandwich knew it too. What the First Lord did not know, initially, was the *degree* to which Howe would subordinate naval operations to military.

Because both men understood the awkwardness of their situations and both were committed by circumstance to supporting the military effort, they sparred warily with each other in their correspondence when it came to the question of cruising and blockading. For the record, because there was always a good chance of parliamentary inquiry into naval matters, Lord Sandwich discussed maritime curtailment as if it commanded a high priority. He pretended the same thing in his public utterances. (We have seen, for instance, that in his speech to Parliament on 26 October 1775 he had implied that there would be a strong maritime effort made in the spring of 1776.) Howe, being subordinate to Sandwich and not trusting him, was in a more immediately dangerous position: he had observed the ruin of Graves's reputation — and Graves had been under Sandwich's patronage whereas Howe was most certainly not.

As soon as he opened and read his secret orders (while still at Spithead), Howe therefore wrote a letter to the Admiralty. It had but one purpose. Noting the part of their Lordships' instructions that directed him to employ his ships for "preventing all Trade and Intercourse" and expressing an "anxiety to render the most exact Obedience" to their orders, he observed that until "some Ports upon the Coasts of America" could be captured, it would

be very difficult to do it, especially "in most part of the Winter-Season."[75] This was deft. Howe did not say that he accorded lower priority to this part of his instructions — only that he would be unable to give it his first attention because the problem of a naval base had to be solved first.

Thereafter, however, Lord Howe made his priorities crystal clear. Immediately upon arrival in American waters he not only spelled out his thoughts on the principal goal but also gave indication of the degree of emphasis he intended to apply. Citing a "Deficiency of Means to make proper appointments for restraining the Trade and intercepting the Armed Vessels fitting by the Rebels in different Ports," and mentioning that he could only spare one frigate to cruise off Boston, he concluded: "For . . . until the General shall have made some further Progress in his Military Operations, I have reason to think the assistance of every Ship which can be collected in Time, will be first wanted for this principal Service." In his next letter he reiterated that first priority belonged to the army's operations, adding that the task of obtaining a wintering base for his naval command came next:

> As soon as the Capital Service impending, the permanent Establishment of the Army in this Province [New York], is effected, to which I conceive their Lordships will approve that every Consideration of lesser Moment should give place, and after a Port of Retreat is secured for the Winter-Use of the Fleet; my earliest Attention will be given to provide more amply than my present Means will admit, the other requisite Services comprehended in the Tenor of their Instructions.[76]

In his subsequent letters Howe gave no room for the slightest doubt that he would concentrate intensively on providing assistance to the major military operation. He acknowledged that disrupting rebel trade was a "Chief Object," but consistently justified his failure to do so by asserting the primary importance of the military operations.[77] If it is to be said that in so acting he "deviated markedly" from his orders, it must also be said that his dispatches indicated his intention from the moment he reached the other side of the ocean. If he was apprehensive as to the consequences, that too was something he had felt from the outset.[78]

The admiral displayed his choice of priorities in another way. Nothing is more common than for generals and admirals to request reinforcements. Although Howe told the Admiralty as soon as he arrived in American waters that he did not have enough cruising ships to accomplish both of the great tasks with which he was charged, he never asked for more of them. Instead, he asked for more ships of the line. Such ships were unsuitable for cruising. Since the Americans possessed no heavy warships and Lord Sandwich was anxious to keep all activated ships of the line in home waters against the possibility of a French attack, the Admiralty rebuffed this request as best it could. But Howe put the request to Germain as well, who forced Sandwich to send out three or four. (What Howe really wanted was their large complements of seamen to man the numerous lighters and boats employed in military operations.)[79]

In sum, Lord Howe's naval dispositions are to be explained by his conviction that by giving full support to the land operations he was not only pursuing the best course for ending the rebellion but also upholding the administration's priorities. He did not sabotage the administration's war plan; he assessed its priorities correctly. Of course he was apprehensive. In mid-September he wrote to the Admiralty that it was "with great Concern" that he was "still unable to make a satisfactory Return to their Lordships probable Expectations" regarding the war at sea.[80] Regarding such "probable expectations," Sandwich sent Howe a private letter, dated 17 October,

75. *NDAR* 4: 1116, 10 May 1776. Howe's orders of 4 May asked him to report his opinion as to the most suitable place to locate a refitting base on the American coast, Halifax being inadequate and not conveniently located for the services that the large squadron was intended to carry out.

76. Lord Howe to Admiralty from Staten Island, 28 July 1776, *NDAR* 5: 1261; 14 August 1776, ibid. 6: 183.

77. For Howe's formal recognition that enforcing the Prohibitory Act was a "Chief Object," see the preamble of his orders to Commodore Hotham of 23 December 1776 *(NDAR* 7: 569).

78. Professor Gruber repeatedly asserts that Lord Howe deviated from his orders *(Howe Brothers,* 142-3, 158, 222). He also states that one reason why Howe was not censured for this was that it "was extremely difficult for anyone in London to know what was happening in America" because of the inevitable slowness of correspondence (158). Although General Sir William Howe was a bad correspondent, Lord Howe wrote regularly, and these letters from the admiral in America during the summer of 1776 reached London without serious delay.

79. HMC, *Stopford-Sackville* 2: 52, 18 December 1776. Sandwich was right to resist such a waste of very expensive ships. One trouble, however, was that it was never easy to find volunteers to detach as supernumeraries who could be sent as extras to America, seamen generally desiring to stay with a particular ship's company. Although Professor Gruber has quoted Captain Hamond's relevant letter *(Howe Brothers,* 141), his account otherwise blurs the true reasons why Howe wanted these ships and why Sandwich was so intent on refusing the request (102-3, 162, 168, 176, 265). It is certain that Sandwich understood Howe's true reasons; see *Sandwich Papers* 1: 163-4.

80. *NDAR* 6: 885-90. Professor Gruber has made the mistake of inferring the Admiralty's intentions from Howe's anxieties. He has compounded the mistake by implying that Howe grew apprehensive because he became increasingly conscious of criticism and worried about his degree of deviation from his orders (e.g. *Howe Brothers,* 142, 204). But, as we have seen, Howe was apprehensive from the start.

expressing the hope that, since twelve more frigates were on their way, it might be possible to make such dispositions as would "render it difficult for rebel cruisers to do so much damage" as they had thus far done; yet the First Lord carefully avoided challenging Howe's sense of priorities by immediately adding: "But while almost the whole American fleet is necessarily taken up in attending the operations of the army, other services must of course in some degree give way to the principal object."[81] Thus, although we may presume that Sandwich did not share Howe's sense of the proper degree, he himself defined the principal object. Moreover, as we have seen, Lord Howe did proceed to mount a blockade when the army's campaigning ended. The only respect in which Howe did not do what he implied he would do was his failure to post a winter watch on the eastern New England coast, from whence rebel cruisers issued forth to do enormous damage. When the results of this particular lapse became obvious, Sandwich was very upset, but even then he confined his criticism to Howe's failure to *warn* the Admiralty that New England warships and privateers had been allowed to run loose.[82] Sandwich adhered to the administration's priorities.

This remained the case until those priorities changed. As we have seen, in late October 1777 the maritime aspect of the struggle began to receive serious attention from the prime minister, Lord North. Both he and Germain realized that at least another year of expensive military campaigning was required. North was particularly worried that Parliament, which would reassemble soon, might balk at supporting a long land war and would more easily accept a plan of maritime warfare. He was also impressed by reliable intelligence that France was vastly increasing its material and financial support of the Americans. Evidently, diplomacy was of no avail; this aid could be interrupted only by naval means.[83] The movement toward a change of strategic emphasis gained tremendous momentum when the news of Burgoyne's surrender at Saratoga arrived on 1 December. Discussions of maritime options rapidly intensified. By mid-January the king was prepared to agree that "a Sea War is the only wise plan."[84] As the winter wore on and diplomatic and naval developments in France attained truly menacing proportions, the government moved, as it had not moved earlier, toward full mobilization of the Royal Navy. Maritime concerns now came to the fore.

81. *Sandwich Papers* 1: 160-1.

82. Ibid. 1: 294.

83. See above p. 235; Mackesy, *War for America*, 173-5; Fortescue, *Correspondence* 3: 470.

84. Bemis, "Secret Intelligence," 235. On the basic change of strategy, see also Mackesy, *War for America*, 154-6; *Sandwich Papers* 1: 323-6, 349-66.

One week after the news of Saratoga reached London, Lord Sandwich wrote a long memorandum in response to a request of the leading ministers that he should "put in writing" his "sentiments upon the naval war . . . [to be] pursued in our present situation." The document (dated 8 December) is too long to be reproduced here, but the first two paragraphs bear so pointedly on the issues which concern us that the words should not be paraphrased:

> The mode of carrying on the war in America has been such for the last two years that the fleet has not been employed in the purposes in which it can be most useful towards distressing the enemy, and making them feel their inability of holding out against the mother country.
>
> Lord Howe has had this year under his command about 90 ships of all sorts, six of them of the line and ten two-deck ships, that is to say ships of fifty and forty-four guns; and it was natural to suppose that with such a force properly stationed he could have made it very difficult for the Americans to receive their supplies, carry on their trade, and fit out privateers to annoy the trade of Great Britain. The contrary however has been the case, because the greatest part of Lord Howe's fleet has been employed in convoying, embarking and disembarking the troops, and attending the operations of the army, which his Lordship in his first letters after his arrival in America mentions as his principal object, to which all others must give place. I do not mean to say that this was wrong, but the consequence of it was that our trade suffered, and that the enemy got the supplies from Europe by which they have been enabled to resist us.

Sandwich went on to grant that no force could be sufficient for blockading rebel ports entirely or "putting a total stop to their privateering." The American coast was too long, with too many inlets, and the weather was too often "favourable to their purposes."

> However, [he added] we may certainly distress them infinitely more than has hitherto been done, and throw such burdens upon their trade and privateering as to make it difficult to carry on either without considerable loss, which, it is to be hoped, together with their want of necessaries from Europe, would soon make them tired of the war.

He then pointed out that the British army would have to assist in securing bases on the coast, places where "the King's ships can resort to at all times and seasons, and which will give them shelter and refreshments for their men; and it is necessary that one of them at least (exclusive of Halifax) should afford complete and secure conveniences for careening and refitting the ships. . . ." To insure that proper facilities were established, he would send a member of the Navy Board to America. He ended

his proposals regarding the American squadron by hammering home the main point: "Lord Howe should be told that his principal object should be to block up the American ports. . . . For these purposes he should keep as many cruisers at sea in small squadrons as his force will enable him to do."[85] Clearly, what Sandwich now proposed constituted a substantial reversal of strategic emphasis: more naval bases should be secured; the army should now be employed to assist a strategy of maritime containment.

When the First Lord privately changed his mind on basic strategy is a point which may or may not be ascertainable by further research, but until he received a clear signal from the leaders of government that they were prepared to rethink their American strategy, he did not urge them to modify it. Nor did he express any criticism of Lord Howe's choice of priorities — at least not for the record, and perhaps not at all. Even at this juncture, he took care to be tactful: "I do not mean to say that this [Howe's inordinate attention to the needs of the army] was wrong." Partly this tact reflected Sandwich's style: he tended to avoid criticizing his admirals. But he also did not want to appear critical of the strategy on which the North administration had so firmly pinned its hopes. Lord Sandwich did not yield to the temptation to misrepresent the Admiralty's expectations of Admiral Lord Howe.

The Politics of Naval Failure

Historians have long known that the naval forces in America assisted the army in the first part of the war, but the extent to which this undercut the capacity for sea control has not been generally recognized. Some historians have simply dismissed the geographic feasibility of a blockade; hardly anyone has paid attention to the fact that when Lord Howe released his ships from "their attendance on the army" in early December 1776, the blockade from Buzzard's Bay to the Chesapeake was quite effective while ships remained on station. The complete failure to cover eastern New England and the brevity of coverage in general has obscured this demonstration of the ability of the navy, once in possession of a couple of suitable ports, to be able to mount a blockade on a long stretch of American coast.[86] While it lasted it was very unnerving to the revolutionary leadership, but the priority given to military operations and the insufficiency of cruisers to serve both military and maritime needs prevented its continuance.

In the beginning, no doubt, the leaders of government were truly ignorant of the degree to which the many and various auxiliary services for the army would prevent the navy from patrolling and blockading. Even experts like Admiral Palliser did not grasp the truth at first. George III, ever disposed to ignore practical limits, never grasped it. That explains why he continued to have high expectations in the maritime sphere, even though he had adamantly opposed the maritime plan for subduing America. But the real facts were available to the Admiralty from mid-1775 onwards. Graves outlined them, Shuldham presented them with intense clarity, and Lord Howe told the Admiralty what his priorities would be as soon as he arrived off New York.

The first point to bear in mind when considering the politics of naval failure is that it was politically convenient for the leaders of government to hide the real facts concerning strategic priorities and naval capabilities from the public as long as they could. The public's expectations of the navy were traditionally high, yet the plan of war gave precedence to military operations in the hope that the war would be ended quickly. The First Lord of the Admiralty was well aware that his commanders in chief in America were therefore placed in a vulnerable position. Sandwich was also vulnerable of course, but when public criticisms erupted he wisely avoided throwing blame on his admirals. As we have noted, however, an effective defense of them required him to explain the actual situation of the naval force in America: its numbers and its primary mission. Neither he nor the other leading ministers were prepared to do this, and the admirals found themselves under fire but essentially undefended. This was not really a policy; it was allowed to occur. It might even be excused as a temporary political necessity.

Yet whenever officers in command find themselves publicly criticized without being effectively defended by those whom they serve, a bitter climate of politics is generated within the service. Politics of a sort was endemic in the eighteenth-century navy because the system of advancement depended upon the approbation and patronage of sea officers — people who could observe and reward a younger officer's conduct. It was a small-scale politics of coteries. What made the situation during the 1760s and 1770s unusual was the tendency toward a broad divide into two camps, in consequence of the revolution in ministerial politics which occurred in the early 1760s as new men replaced old under a new, young king.[87]

85. *Sandwich Papers* 1: 327-35.

86. Professor Syrett's work is an exception. He has recognized the persistent inadequacy of ships and the salient fact that Lord Howe had to choose between the army and the blockade; see "Fleet that Failed," 76. See also *Royal Navy*, 1-3, 27, 55-60. Syrett, however, accents the 1776 blockade's lack of success, which is accurate if one considers the whole year, but he does not take notice of its achievements during the brief period when it was genuinely tried on the Middle Atlantic coast.

87. Mackesy, *War for America*, 12.

Although most senior naval officers tried hard to protect the corps from being seriously influenced by ministerial politics (this was a Royal Navy tradition of long standing), these circumstances made their task very difficult.[88] When one adds the consideration that ministerial and parliamentary politics during these decades actually concerned issues, not just new men versus old, and that a major issue after 1763 — perhaps *the* major issue in British politics in these years — was the imperial question regarding North America, one sees that conditions were ripe in 1775 for divisive naval politics. In this political climate the Admiralty's passive behavior while the reputations of Admirals Graves and Howe were being publicly impugned (and it might be mentioned that Admiral Shuldham was never afterward given a sea command) reverberated through the officer corps.

Moreover, there was one respect in which ministerial criticism of the admirals was active. This criticism appears to have emanated chiefly from Lord George Germain, with the full support of George III. Germain believed in the effectiveness of force. He believed that the rebellious Americans should be harassed in every way, on land and sea. Unless they were subjected to harsh measures, they would not alter their political posture.[89] What seemed to interest Germain most about Howe's blockading orders of December 1776 was a paragraph advising naval commanders that persons "dwelling upon the Coasts adjacent to the Stations of the Ships" should be allowed "the use of their ordinary Fishing-Craft, or other means of providing for their daily subsistence and support; where the same does not seem liable to any material abuse;" furthermore, that captains were to encourage amicable relations and friendly dispositions by allowing them "every indulgence" that the Prohibitory Act would permit.[90] This made Germain and the king furious, and Sandwich (probably under their prompting) censured Howe for it.[91] In 1777, as Germain's dissatisfaction with the Howes grew, he focused his criticism of the admiral on the issue of leniency and on his reluctance to raid colonial ports. In early August he remarked sarcastically to Howe, now that British waters were swarming with American privateers, how wonderfully effective the indulgence of the fishermen had proved to be. As one would expect, Germain habitually favored raiding. When the ministry felt the growing pressure of popular outrage in 1777 over the navy's failure to contain American privateers, he was particularly emphatic in urging the Howes to raid their home ports.[92] The Howes regarded such raids as sideshows for which they had neither ships nor troops to spare.

Germain's — and George III's — concern about leniency and about the reluctance of successive admirals to raid colonial ports has muddied the historical waters. We have already observed the treatment of Graves on this score. This line of criticism of Lord Howe figures prominently in the historical literature, and the implication is that the same lack of aggression and vigor on the part of General Sir William Howe, which ruined any chance of quick military success, was also somehow responsible for the poor performance of the admiral's forces in the maritime sphere. That the admiral's attitude may have affected the performance of his commanding officers cannot be completely ruled out, but the case is by no means clear-cut because his orders can be justified in practical terms. Policy with regard to subsistence fishing certainly reflected a difference of approach to the problem of bringing the Americans to a "due submission," but there was a good reason for allowing it. The indulgence to the fishermen might be abused, as he recognized, but on the other hand many local fishermen would have been impelled to sign onto privateers or provincial men-of-war if they could no longer support their families by fishing.[93] As for cautioning against undue severity in enforcing the Prohibitory Act, whether it was part of the admiral's duty to cultivate friendliness is admittedly debatable, but the effect of these words on operations was almost certainly nil: the assiduousness of a commanding officer in corralling prohibited sailings was practically guaranteed by the hope of securing personal profit in the form of prize money. On the matter of raids, was there any strategic ground for believing them to be militarily useful? The American privateers which upset the British public were mostly those in European waters and the Caribbean, and since the French were willing to provide bases away from

88. On the degree to which the Royal Navy's officer corps was traditionally immune from ministerial politics and civilian patronage, see N.A.M. Rodger, *The Wooden World: An Anatomy of the Georgian Navy* (London, 1986).

89. Mackesy, *War for America*, 150.

90. *NDAR* 7: 552-7, 569-74.

91. Mackesy, *War for America*, 150; *Sandwich Papers* 1: 288.

92. Germain to Lord Howe, 4 August 1777, HMC, *Stopford-Sackville* 2: 73. On Germain's persistent desire to raid ports, see ibid., 58, and HMC, *Various* 6: 138. See also Gruber, *Howe Brothers*, 167, 185, 221, 253, 271-2, and Mackesy, *War for America*, 151. In Lord Sandwich's long memorandum of December 1777, cited above, one finds an interesting further illustration of Germain's enthusiasm for raiding. To the "principal object" of blocking up the American ports there was added another principal object: of cooperating with the army to make "ourselves masters of those ports, destroying their shipping, and alarming and attacking their coast upon every proper occasion." The editors note that the original version contains the notation that these words were "added by the desire of Ld. Geo. Germain."

93. On this issue I obviously disagree with Professor Gruber's view (*Howe Brothers*, 209-10) and agree with Lord Howe's unflinching reply (HMC, *Stopford-Sackville* 2: 68).

home for them in both areas, raiding their home ports was largely irrelevant — a waste of naval effort.[94]

In fact, it may well be that Germain himself did not believe that raids on the rebel ports would have much effect, but rather was trying to get Howe to take some dramatic retaliatory action, something which would "win the applause of the ignorant as well as of better judges." In short, he wanted such raids launched for political reasons. Instead of agreeing to this, the admiral offered to resign. At the time of his appointment he had made it clear that he would carry out the ministry's strategy but not a program of repression and punishment, and we may infer from his personal political affiliations that he was decidedly not prepared to aid the administration politically.[95] In any case, historians who have entertained these favorite notions of George III and Germain have helped to obscure the real decisions and constraints which led to naval failure.[96]

The ultimate constraint, of course, was the shortage of ships. Why did it take so long to build up the force of cruisers? We noted earlier that freshly fitted cruisers were detained by the need to escort various military expeditions across the Atlantic. Here we shall examine the more basic causes of delay.

One reason was that the need for a naval build-up caught the royal dockyards at a bad moment. In order to save money on the naval budget, a reduction in the number of shipwrights had been carried through in 1774. Further savings were expected from a new scheme of paying workers by a measured task; this was being introduced in 1775 at about the same time the troubles in New England were escalating. The attempt to introduce "task work" provoked a wave of strikes.[97] A further impediment was the unusually cold winter of 1775-76, which at times interrupted local transport.

There was a special burden as well. In mid-summer 1775, when the government began to awaken to the need for more cruisers, the Admiralty and the Navy Board were increasingly preoccupied with the need to obtain transports for the various military expeditions.[98] Palliser, who served as liaison in this business, informed Sandwich in early January 1776 of the huge catalog of demands which the cabinet proposed: transports for 27,000 infantry and 1,000 cavalry, "the whole to be ready in the month of March," plus troop reinforcements to Jamaica, space for "a very large number of draught horses," and frames and materials for building vessels to serve "on the Lakes." He further reported: "I have engaged that more shall be done than has ever been done on our parts; but it must be remembered that we are now required to provide (as it were instantly) more transports than the greatest number employed in the last war, which were years growing to that number."[99] Every transport without exception had to be inspected for seaworthiness, equipment, measured tonnage, and other qualities in a royal dockyard.[100] This must have put a great strain on the yards at Deptford and Woolwich.

Against this, however, it should be borne in mind that the naval establishment enjoyed an unusual advantage in the war that began in 1775. The usual cause of slow British naval mobilization in the eighteenth century was the time involved in fitting out heavy battle squadrons in the dockyards and getting enough seamen to fill their complements. Such squadrons were not mobilized in 1775 and 1776. Ship for ship, preparing cruisers for sea required less time and far fewer shipwrights and seamen.

Ordinarily the British navy did not have enough cruisers in reserve at the beginning of any war of the eighteenth century because it was not good economy to try to keep aging small ships "moth-balled." Moreover, new ones could be built rather quickly, usually in six to eight months, and the work could be accomplished in private yards and thus not interfere with fitting out the battle fleets or other urgent demands upon the royal dockyards. When a war began, nothing was more common than for the Admiralty to order a dozen or more new frigates and sloops of war from private builders immediately and to continue ordering them as necessary. For instance, during the first three years of hostilities in the Seven Years' War (1755-57) the British navy ordered a total of forty-two new-built frigates: twenty-seven sixth rates (twenty to twenty-eight guns) and fifteen fifth rates (thirty to forty-

94. Whether, when, and where raiding would have been strategically beneficial are not easy questions to answer, but one should distinguish between raids designed to keep the colonists off balance and cut important communications routes and raids on port towns where in most cases the real effect could only be punitive.

95. The words quoted are Mackesy's nice summarization of Germain's letter to Lord Howe. Mackesy added: "These were the slender grounds which Howe offered for his resignation" *(War for America,* 151). Slender perhaps, but they touch on major issues which had concerned Howe from the outset, and the only support the administration had ever had the right to expect from him on the political front was his silence.

96. Most notably Professor Gruber; however, this theme was also developed at some length by Eric Robson *(American Revolution,* 113-22, 151) and comes into Mackesy's analysis as well (*War for America,* 101-2).

97. I am indebted to the work of R.J.B. Knight for this information.

98. Fortescue, *Correspondence* 3: 245. In August transports were ordered for moving the regiments in Ireland and also for carrying Hanoverian soldiers to Gibraltar and Minorca so that the British garrisons there could be transferred to America. After that, there was the expedition to the Carolinas, the expedition to relieve Canada, and the huge expedition headed for New York.

99. Palliser to Sandwich, 5 and 6 January 1776, *Sandwich Papers* 1: 95-7.

100. See David Syrett, *Shipping and the American War 1775-83* (London, 1970), 106-20, 186-8.

four guns). Eight of these ships were ordered in 1755, fifteen in 1756, nineteen in 1757.[101]

By contrast, no new frigates were ordered in 1775; three were ordered built in 1776 and one purchased; four were ordered built and one purchased in 1777: a total of nine in the first three years of hostilities. If one looks at the pattern of orders for new frigates during the whole war (1775-1783), one finds that only a small percentage were ordered before late 1777. Moreover, only about a half-dozen new frigates were actually launched between 1775 and 1779 in contrast to about sixty launched between 1779 and 1783.[102]

When trying to understand why so few new cruisers were ordered built between 1775 and 1777, one must take account of the twenty-six reasonably new fifth-rate frigates which were already on hand in 1775, either on active service or in reserve and suitable for fitting out. That was an unusually high number. (The nine new-built frigates that were ordered between 1775 and 1777 were all sixth rates.) Still, if pressure on the royal dockyards was causing delays in preparing these fifth rates for sea, it would have been wise to place orders with the private builders right away. Moreover, when Lord Sandwich told Parliament in October 1775 that the North American squadron would have seventy ships in the spring, he must have known that this would account for every remaining frigate in a condition to be fitted out. By the middle of 1776 there were no more frigates in reserve.[103] While there was every reason to think that the need for frigates would continue to grow, the Admiralty ordered only three new-built frigates in 1776. In the event, the shortage of cruising ships in 1777 was dire. This was the year in which 74-gun ships were employed in the Channel against swift privateers which they could not possibly catch except in hard weather. (They were useful, however, as convoy escorts.) In early August 1777 the Admiralty was clearly alive to the urgent need for more cruisers, and Palliser wrote to Sandwich in late September:

> We hear daily and almost hourly accounts of privateers in all quarters. It is truly mortifying we have nothing proper to send after them; I am glad your Lordship approves of my proposal to order the building of more frigates, for according to my foresight our present difficulties are likely to increase. Whilst with our utmost exertion we shall only keep up our present fleet of frigates (being employed as they now are), the Americans are increasing theirs at an amazing rate, besides their innumerable small privateers; at the same time, France is exerting herself to the utmost to increase both frigates and line of battle ships.[104]

Although the navy purchased some vessels and converted them into small armed cruisers, there continued to be a crucial need for fifth- and sixth-rate frigates, yet only four were ordered during the year 1777.

What accounts for the Admiralty's amazing backwardness about ordering new frigates in the merchant yards? At this point it is necessary to bring capital ships into the picture. Beginning in 1776 an accelerated fitting out of heavy ships of war was quietly taking place in France. Spain had rejuvenated her navy, and both Bourbon powers were in a diplomatic posture which would enable them to cooperate in a maritime contest against Great Britain. The British failure to prepare heavy ships of the line to keep pace with the naval armaments of these powers was undoubtedly the most serious failure of the war. As is well known, it set the stage for serious naval disappointments from 1778 to 1781, because it was so hard to make up for the lost time.[105]

Did the task of readying capital ships interfere with the augmentation of cruisers? It might easily be surmised that this was so. But it was not so, because during the years in which the British navy fell behind (1775-77), capacity problems in the royal dockyards could have been side-stepped. In 1775 and early 1776, new cruisers could have been built in merchant yards, lessening the pressure which refurbishing older ones placed on the royal dockyards. From mid-1776 onwards, dockyard work on new capital ships could not have affected the augmentation of cruisers because all cruisers in reserve had been activated by then and new ones would have to be built in merchant yards. Thus, the cruiser shortage stemmed from the government's unwillingness to accept the expense.

101. For these figures I am indebted to Robert Gardiner, who compiled them in connection with his study, "The First English Frigates," *Mariner's Mirror* 61 (May 1975): 163-72, but did not publish them in that article. (To simplify the comparison it is best to confine it to frigates, ignoring sloops of war and small armed vessels as well as ships obtained by capture.)

102. I am grateful to D. J. Lyon of the National Maritime Museum, Greenwich, for placing his work at my disposal so that I could extract data indicating when frigates were ordered. My compilations are for purposes of rough comparison only. Truly accurate statistics would involve intricacies which ought not to be addressed here, such as the fact that some 44-gun frigates had originally been built as 50-gun ships and cut down.

103. An official Admiralty declaration to the cabinet that all frigates of forty guns, except one that had to be condemned, were in America, was made in a letter dated 28 August 1776 (*NDAR* 6: 574). See also Fortescue, *Correspondence* 3: 379, 20 June 1776.

104. For the situation in 1777, see Syrett, *Royal Navy*, 68; the quotation is in *Sandwich Papers* 1: 249-50.

105. Figures showing when new British ships of the line were built in this war are analyzed in Baugh, "Why did Britain lose command of the sea," in Black and Woodfine, 153-55.

Lord Sandwich's first major request for putting more ships of the line in commission (21 July 1776) is, in this regard, revealing. His letter to Lord North promised that the twelve ships which he wanted fitted for sea would "occasion no apparent expense." The accent here should be on the word "apparent" because Sandwich went on to explain that it "would be done in our own dockyards with the men in annual pay" and therefore would not show up as an extra expense right away. He added, however, that "the real expense this will occasion will be that, if the storm does not blow over soon, the loss of their labour must be supplied by setting up [i.e., contracting to build] some ships of the line in the merchant yards."[106] Thus, money for dockyard wages would not be needed from the Treasury immediately, and even the navy debt would not increase until the workers were actually paid. (It was fairly common for dockyard workers' pay to be postponed a couple of quarters.) Above all, the expense would not be visible in the accounts submitted to Parliament for many months to come. May it be reasonably guessed that this same line of thinking applied to the policy of refurbishing every possible frigate remaining in reserve rather than ordering new ones in the merchant yards (for which incremental payments would have had to be made as they were being built)? In 1778 when Edmund Burke flung "the fine gilt book of estimates, calculated to a farthing, for purposes to which the money granted was never meant to be applied," at the Treasury bench, it was not without due provocation.[107] What may be inferred with a degree of certainty from Sandwich's letter is that postponing and hiding the true expense greatly appealed to Lord North. Indeed, the prime minister's public parsimony is a well-established fact.[108]

To North's instincts as a Treasury man must be added, however, a much more important factor: his fear of asking too much of the public. Parliamentary support for the policy of subduing America by force of arms was strong, but at what price, for how long, and in the face of what vexations and dangers? As it happened, the question never arose in pure form because the war became a major contest for great-power supremacy — that is to say, a vital maritime struggle against the traditional enemy, which Parliament and public could not fail to support to the full. But before 1778 the war was a struggle to re-establish imperial authority on a distant continent, an issue whose importance to national survival was debatable. While North and his ministers assumed a confident posture and enjoyed a large parliamentary majority, they knew that this was a politically charged enterprise and that the military task was formidable. The chosen strategic plan envisioned a struggle of short duration. The prime minister's conduct indicates that he was ready to accept the huge expense of inflicting the decisive military blow, but was equally disposed to limit or obfuscate other war expenses, and anxious to conclude the war before France or Spain could take advantage of Britain's distracted situation.[109]

Thus the whole plan was a huge gamble. Since the policy of holding down other war expenses chiefly affected the navy, the risks were chiefly incurred in the realm of seapower. The result was the two naval failures: the failure to deploy and assign enough cruisers to control the American seaboard, and the failure to begin soon enough to mobilize enough ships of the line to cope with the French and Spanish navies. The first of these failures became painfully obvious in 1777, the second from 1778 onwards, but *both* were the result of the North administration's policy during the period from 1775 to 1777.

One cannot say with certainty whether George III, Germain, North, and Sandwich understood the full extremity of the gamble. George III probably did not understand. Germain seems not to have been concerned about the maritime aspect except when it affected military operations or public opinion. North always worried about everything, and his actions from late 1777 onwards do reveal a serious concern over the naval situation. His public posture was to dismiss the growing threat posed by French armament — ministers reiterated that France wished to remain on amicable terms with Great Britain — but he was keenly aware before the end of 1777 that the failed gamble had placed his country in naval jeopardy.[110] After the news of Saratoga, he hoped that Germain would resign and that the attempt to subdue America by military force would be abandoned. In early 1778 he was sure he

106. *Sandwich Papers* 1: 215.

107. *Parl. Hist.* 19: 730, during the House of Commons debate on the navy estimates, 13 February 1778. There were Parliamentary investigations into naval expenses: e.g. *Parl. Hist.* 19: 754-8.

108. On his inclination to hold down peacetime naval expenditures, see Peter D. G. Thomas, *Lord North* (London and New York, 1976), 96.

109. See esp. HMC, *Stopford-Sackville* 1: 136-7. Lord North was not the only one concerned about the possibility of the expense reaching a level that would be politically unacceptable in Parliament. Germain thought of this too. See Gruber, *Howe Brothers*, 174-5. Some readers will recall that the Johnson administration obfuscated the true cost of the Vietnam War in 1965-7.

110. There were many assurances given in Parliament (e.g. *Parl. Hist.* 18: 625-6, 709-10). George III's power to close his mind is revealed in his mode of dismissing unpleasant intelligence reports received in autumn 1777; he belittled these reports of French warlike tendencies and naval preparations by pointing out that one source was a "stockjobber" and another "also a dabbler in the Alley" who hoped for government employment. See Fortescue, *Correspondence* 3: 481-2, 498. The reports were essentially correct; on French naval augmentation see Dull, *French Navy*, 49-83.

ought himself to resign, indeed that everyone who had had a principal role in war policy should be replaced.[111]

What about Lord Sandwich? Was the First Lord of the Admiralty aware of the extremity of the naval gamble? In this case, the two naval failures must be treated separately. Regarding the failure on the other side of the Atlantic, Sandwich never showed much initiative or enthusiasm for the more extended sort of conflict that a blockade strategy implied. He seemed not to take the maritime war in America to heart. We have noted that when Parliament met in late October 1775 he blandly obfuscated the forwardness of remedies and gave promises that were not kept. On the same sort of occasion in November 1777 — by which time the navy's insufficiency of cruisers was notorious — his statements were similarly reassuring and suspect.[112] Granted, in the early months of hostilities it is likely that he failed to comprehend the level of needs, but he knew before the end of 1775 that the preparation of cruisers was sadly in arrears while the services expected of them were escalating. We may note how the words of his 8 December 1777 memorandum (already quoted) manage to imply that he thought, because anyone would have thought, that Lord Howe's force was sufficient: ". . . it was natural to suppose that with such a force properly stationed he could have made it very difficult for the Americans to receive their supplies, carry on their trade, and fit out privateers to annoy the trade of Great Britain." This is deftly put because it does not say what he actually thought himself, and by autumn 1776 at the latest no one on the Board of Admiralty could have been under any illusions as to Howe's intentions. Yet no complaint was made. And if Sandwich thereupon sought to have more frigates built, he left no trace of it in his correspondence; the sense of urgency seems to have come from Palliser.

The explanation for this lackadaisical approach to the cruiser question has two parts. The first is that Lord Sandwich was deeply committed to the North administration and to the war plan which accented military operations while seeking to hold down other expenses. We have seen that he never protested against the plan or even complained about Lord Howe's extraordinary devotion to the army's needs until the administration was prepared to abandon it. Evidence has been presented, and more could be produced, that he repeatedly acquiesced in the administration's efforts to hold down naval expenditure, the most important consequence in the first three years of the war being that the shortage of frigates was chronic and reached scandalous proportions in 1777.

The second part of the explanation is that Sandwich's naval priorities were European; while other ministers concentrated on the news from America, Sandwich kept a nervous eye on the growing naval puissance of France. On this he was consistent from the beginning. He urged Graves to send home his handful of large ships, promising to replace them with 50-gun ships. He begged Howe not to ask for large ships. On the issue of readying these ships of the line, he was not a quiet and unprotesting minister; he tried very hard to overcome Lord North's reluctance and to some extent succeeded.[113] His December 1777 memorandum concluded with a ringing call for immediate preparation of a strong battle fleet; the French, "our inveterate enemies," he said, were not to be trusted.[114] There is more than a little irony in the fact that the Admiralty's failure to overmatch French strength in capital ships has been the chief charge levelled against Lord Sandwich by naval historians.

Indisputably, the North administration's war policy put Sandwich's reputation under a greater threat than that of any other minister. He was certainly aware of this. His only defense, as he said in March 1778, was that he "could not deserve censure" because "he acted ministerially; the measures were deliberated upon elsewhere; and if he did his duty, as obeying the orders he received, he was by no means responsible for the events." In May 1778 he told the House of Lords that as to "the general censure thrown upon the conduct of naval affairs, and pointed personally to him, . . . [he] was no more answerable than any other individual in administration." Few First Lords of the Admiralty in the eighteenth century were prepared to pass on their responsibility for the state of the navy so easily. Lord Sandwich's unfulfilled public promises and

111. When offering his own resignation to the king, North stressed his personal incapacity to provide adequate wartime leadership. This was decorous, and he really meant it, but he also thought that the whole ministry should be changed. See Thomas, *Lord North*, 115.

112. On 18 November 1777 Sandwich acknowledged to the House of Lords that Lord Howe's needs had "stript us of our frigates," but he added that "care has been taken since to remedy that evil and replace them." He mentioned new construction and purchases and spoke of ninety to one hundred replacements. He did not make clear that most of the replacements would be small armed vessels rather than frigates (*Parl. Hist.* 19: 377). It appears that he did not make this clear in a speech of March 1778 either. At least one of the audience, the Earl of Bristol, was misled, since in May he reminded the peers of Sandwich's promise: "The noble lord told us, in March, he had 90 frigates, to replace those with lord Howe, if any were wanted. . . . My lords, it turns out there were no frigates fit for service" (ibid. 19: 1155).

113. In late October 1776 he had a considerable success; see *NDAR* 7: 704-5, 709, 715, 718-21. Sandwich's effort to build up the battle line is traced more broadly in Mackesy, *War for America*, 170-6.

114. *Sandwich Papers* 1: 332-5. The full title of the memorandum was: "Opinion about the Naval War Dec: 8th 1777 sent to Ld North shewing the impropriety of trusting to the promises of France & Spain, and proposing further Armaments" (ibid., 327).

his obfuscations, while serving the immediate political needs of the administration, seriously damaged his reputation as First Lord. But his explanation of how naval inadequacy had occurred was basically truthful. As the Duke of Richmond remarked in reply, it amounted to a confession "that administration are culpable."[115]

Nevertheless, the North administration, with the same principal ministers directing the war, remained in office until 1782. It was held in office by the king, who refused to allow North to resign, and by the fact that neither Germain nor Sandwich could be forced out without tumbling the whole administration. Thus the same prime minister and First Lord of the Admiralty who had allowed naval inadequacy to develop continued to preside over the misfortunes that ensued. This meant, of course, that in the officer corps the mistrust of the Admiralty engendered by the fates of Graves and Howe persisted. In this respect, for all his ability and expertise in naval administration, Lord Sandwich became a naval liability. Above all, it meant that when Vice Admiral Sir Hugh Palliser brought charges of misconduct against Admiral Augustus Keppel for his handling of the fleet in the great battle off Ushant (1778), the resulting court-martial was a catastrophe for naval morale, for here was the admiral who stood closest to the regime (as Sandwich's right-hand man in uniform) bringing serious accusations against a well-loved and respected senior admiral whose personal and professional connections inclined toward the opposite camp.[116] Divisiveness in the officer corps was indeed part of the story of naval failure in the war for America, and the manner in which the ministry's political expediency during the years 1775-77 contributed to the poisonous climate should not be overlooked.

In one key respect, however, the position of the navy was fundamentally transformed as the war progressed. As we have seen, there were really two naval mobilizations in this war: the first, from 1775 to 1777, was reluctant and restrained; the second, set in motion at the end of 1777, was urgently pursued, comprehensive, persistent, and very costly. Admittedly, some immediate prewar circumstances did inhibit the first in the early months, namely the 1774 dockyard work-force reductions and the 1775 "task-work" reforms, both of which had been decided upon (to save money on the naval budget) prior to the eruption of hostilities. But the role of prewar factors was negligible compared to the effect of the inadequate level of mobilization from 1775 to 1777. After 1777 the effort made to build new warships — ships of the line as well as cruisers — was prodigious. It started too late, and British naval capability suffered for a long time, but in the end the naval competition with the Bourbon powers was won. A few months after the surrender of a British army at Yorktown — the event which finally ushered the North administration out of office and insured the independence of the thirteen colonies — the British navy's strength and performance overcame the combined naval forces of France and Spain.[117]

115. *Parl. Hist.* 19: 829-30, 2 March 1778, and 19: 1150, 1152, 25 May 1778.

116. See Mackesy, *War for America*, 237-43. Piers Mackesy correctly speaks of Palliser's "calamitous error in judgment" and mentions the understandable causes of his anxieties, but something needs to be said about Sandwich's calamitous error, or perhaps the regime's, in failing to bring him immediately and firmly under control.

117. The eventual naval recovery is discussed in Baugh, "Why did Britain lose command of the sea," in Black and Woodfine.

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The Tonnage of Europe's Merchant Fleets 1300-1800

RICHARD W. UNGER

The relative size of European merchant fleets was an issue of some importance at the beginning of this century. However, historians have explored the question of total tonnage rarely, if at all, since World War I. There were no conclusive answers given back at the start of this century, nor is it possible to offer any final authoritative measure now. Nonetheless, some of the large body of work on maritime history done over the past eighty years does offer more information about the size of merchant fleets. That information can be used to generate, if not a final answer, at least a more accurate picture of the scale of European shipping from the late Middle Ages to the beginning of the age of steam.

Measuring the relative size of merchant fleets was an issue for nationalist historians around 1900. They were concerned with questions about the relative economic and political strength of different parts of Europe. They used data on shipping capacity along with many other sources to indicate changes in the structure of international power in early modern Europe. Given the state of technology in that period, the size of the merchant fleet did offer an indication of relative naval strength. The size of merchant fleets can still offer a barometer not only of political strength but also of economic strength. It is clear that economic growth did not start with the Industrial Revolution and that Europe went through a long-term increase in productive capacity, with variations certainly, from the late Middle Ages. That growth is very difficult to measure, but the size of merchant fleets may be a way to explore the pattern of that economic growth.

I am indebted to the late Ralph Davis, Lawrence Stone, Murray Tolmie, Jon S. Kepler, and Geoffrey Scammell for their comments and suggestions on an earlier version of a related paper. I am also indebted to J. R. Bruijn and to the participants in the seminar of the International Commission for Maritime History, King's College, University of London, for their criticisms and observations.

Shipping was an industry that enjoyed rapid expansion in the early modern period. It was also a modern industry by the standards of the day. Ships and their sailors used inanimate power with increasing effectiveness, converting it to work which could in turn yield direct benefits. It was a pattern typical of the later Industrial Revolution. The data on the size of merchant fleets can also serve to show the effects of government policies designed to direct the size and composition of merchant marines. Governments took seriously their role in deciding what types of ships and shipping were best, so their actions deserve careful consideration as an indication of the kinds of government policies that officials thought were most effective in generating the desired results.

Though it is possible, in light of the intervening work since the turn of the century, to say more about the scale of European shipping in the period, it is still a matter of counting. It is premature to expect much more than the most simple analysis of the data. Discussion must be rather more descriptive and introductory. Despite that, some rather stark results emerge from simple inspection of the most straightforward of the figures.

I

The magisterial effort to compare the size of fleets was that of Walther Vogel, the prominent writer on German maritime history, in his "Zur Grosse der europäischen Handelsflotten im 15., 16. und 17. Jahrhundert," which appeared in 1915 in the *festschrift* for Dietrich Schäfer, another historian devoted to recording the historical importance of maritime affairs to Germany.[1] In the

1. Walther Vogel, "Zur Grosse der europäischen Handelsflotten im 15., 16. und 17. Jahrhundert," in *Forschungen und Versuche zur Geschichte des Mittelalters und der Neuzeit, festschrift Dietrich Schäfer* (Jena, 1915), 268-333.

aftermath of German unification, the naval arms race with Britain, and then the First World War, such work took on a special urgency. In 1896 Michael Oppenheim, the historian of the English navy, had already given some data on that navy, most notably for the sixteenth century.[2] But since the great summary by Vogel there has been no effort to take on the whole of Europe over an extended period. There have been some notable forays dealing with a shorter term or for one jurisdiction. Notable among them is the quite ambitious work by the English historian of navigation, David W. Waters, who committed himself in a graph to English and Scottish figures for the years 1580 to 1780, connecting points where there are some moderately reliable figures though avoiding issues of fluctuations between those points.[3] J. R. Bruijn, the historian of the Dutch navy, offers some estimates as well for the size of the Dutch merchant marine, but his figures are restricted largely to the seventeenth century.[4] Combined with other more isolated estimates of shipping capacity and with figures collected earlier, those data do serve to give, at the least, a general impression of the development of European shipping.

In all cases, historians have had to rely on essentially two types of sources for their figures. The first and best source by far is government surveys. In the reign of Queen Elizabeth I, for example, the English state embarked on a comprehensive effort to establish the number of ships in England, their tonnage, and in some cases, the number of sailors available for service in them. For England there are port records and returns from royal efforts to impress ships for naval service from the fourteenth and fifteenth centuries, as well as a few returns done for the Court of Admiralty for some districts beginning in the 1530's. But none of these was on a scale of the reports from the reign of Elizabeth. The figures continue with a survey done in the reign of Charles I. The next step was a system of official returns which began in 1686 and continued throughout the eighteenth century, although the method of measurement was changed in 1773, making comparison with earlier figures difficult.[5]

Similar quasi-public investigations in Italian merchant republics in the fifteenth and sixteenth centuries preceded the English surveys. In France, the greater interest in the navy in the seventeenth century as well as the expansion of the scope of government generated efforts to find out, if not how many ships might be available, at least how many sailors could be counted on for naval service. Manning the navies of Europe was a constant problem throughout the period, and eighteenth-century French rolls listing seamen available for service were an attempt to deal with that problem.[6] The surveys were, in general, a product of thinking about the economy and about the role of government which came to be called mercantilist. They were also a product of existing maritime technology which created the need for the information.

While the surveys are the best source of data on the size of the European merchant marine, they are not without their problems. Surveys were not common in many parts of Europe. States without a central government or even without a strong central government, like the Dutch Republic, did not have surveys. Even in those ports, republics, or kingdoms where surveys were made, not all ships were included. Some, especially smaller vessels, could and did elude enumeration. Coastal and inland vessels might or might not be included, yet some of the coasters were sizeable, and in some parts of Europe, such as England or Genoa, the coasting trades employed an important if not massive portion of total tonnage. Whether or not such vessels were included in the surveys, however, depended on the enthusiasm of the individual keeping the records and the decision of the compiler of all the local reports. In addition, flags of convenience are by no means a recent invention. Because of the frequent wars, the piracy, and the legal uncertainties to do with seizure at sea, captains could and did change their home port when it suited them. Some ships carried multiple papers, producing the appropriate ones when needed, and the changes in declared home port could skew surveys. For example, in 1572 the port of Emden boasted a total fleet of 42,000 tons. That figure was larger than the one for the whole English merchant fleet in that year.[7] Emden was next to the Dutch border and so offered a safe and, as it turned out, temporary haven for shipowners from Holland and

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2. Michael Oppenheim, *A History of the Administration of the Royal Navy and of Merchant Shipping in Relation to the Navy* (London, 1896), especially 171-177.

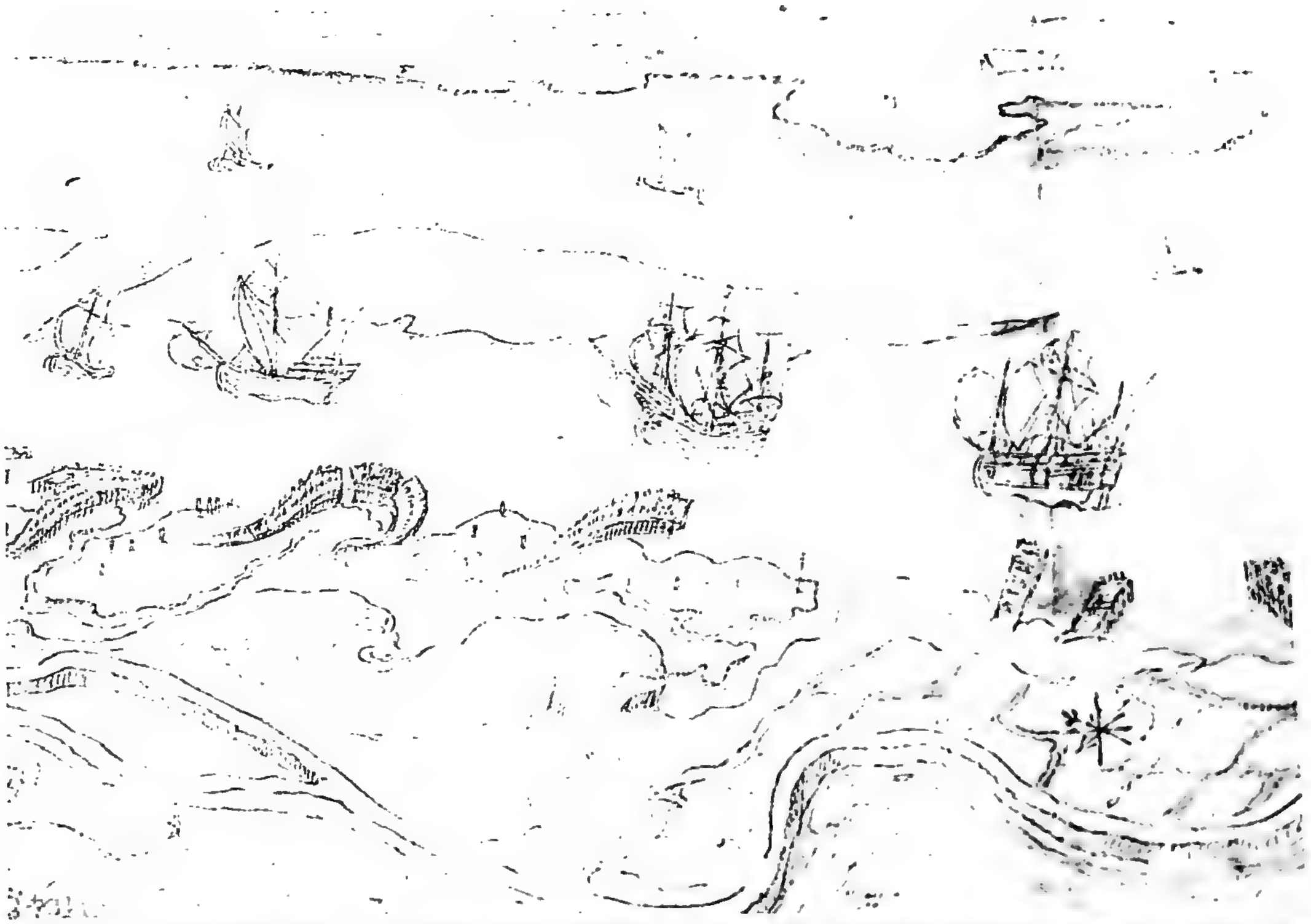
3. David W. Waters, "'The English Pilot' and English Shipping: English Sailing Directions and Charts and the Rise of English Shipping, 16th to 18th Centuries," The Taylor Lecture in *The Journal of Navigation* 42, no. 3 (September 1989): 317-354.

4. J. R. Bruijn, "Recrutement et enrôlement dans la marine marchande dans les ports néerlandais (1600-1900)," in S. Cavaciocchi, ed., *I porti come impresa economica* (Prato, 1988), 551-567. The same or similar estimates can be found in his "De vaart in Europa," in L. M. Akveld, et al., eds., *Maritieme Geschiedenis der Nederlanden*, vol. 2 (Bussum, 1977), 200-241.

5. Oppenheim, *Administration of the Royal Navy*, 171-177; Ralph Davis, *The Rise of the English Shipping Industry in the 17th and 18th Centuries* (London, 1962), 6-7, 395-397.

6. James Pritchard, *Louis XV's Navy, 1748-1762: A Study of Organization and Administration* (Montreal, 1987), 71-74; Alain Cabantous, *La Vergue et les Fers: Mutins et déserteurs dans la marine de l'ancienne France* (Paris, 1984), 80-83.

7. Vogel, "Zur Grosse der europäischen Handelsflotten," 283. His source is B. Hagedom, "Betriebsformen und Einrichtungen des Emder Seehandelsverkehrs in den letzten drei Jahrzehnten des 16. Jahrhunderts," *Hansische Geschichtsblätter* (1909): 359.



Ships along the Scheldt River, downstream from Antwerp, from *Zelandia Descriptio 1548-1550*. Courtesy of College Van Burgemeester en Schepenen, Antwerp.

Zeeland. The 1572 Emden figure, then, reflects nothing more than the political upheaval of the Dutch Revolt.

The second principal source for data on the size of merchant fleets comes from records of specific trades. Customs officials collecting duties on all goods or on certain goods at certain points sometimes directly, but usually inadvertently, recorded the volume of shipping. Using figures on the quantities of goods, it is possible to extrapolate to estimate the tonnage needed to carry that volume and from there to extrapolate to the size of the merchant fleet. Records of trades were the principal source for Vogel, among many others. The best of such records are those for the tolls collected by the kings of Denmark on ships and goods passing through the Sund. The Toll Registers run with few gaps from the second half of the sixteenth century to the end of the eighteenth. They are unique in that they cover such a long period and enumerate shipping in a number of different ports at a critical site for seaborne commerce in northern Europe. The records of other places and other ports are not as extensive but offer a similar basis for estimating shipping tonnage.

With toll records, however, there are problems as well. While they show the quantity of goods passing a particular point, they do not show how frequently the ships which carried those goods made a trip nor do they typically show the average size of the vessels. Consequently, extrapolation from the volume of trade to the volume of shipping is open to sizeable error. Duties fell on some goods but not on all goods, and since no ship carried just one thing there may have been more capacity, the ability to carry more goods, than is shown from the duty paid. It is also true that shippers did not always report accurately the volume of goods carried. Smuggling was common, and the higher the duty and the more diligent the customs collector the more profitable was dissimulation. Smuggling could lead to an underestimate of carrying capacity both because some goods were not reported at ports and because some ships avoided ports entirely and thus never appear in the records.

Efforts to calculate the size of European merchant marines are bounded by categories of the nineteenth and twentieth centuries. In an era of national states and of

official registration, what is being measured is clear, but the concept of a national merchant marine was unknown in the sixteenth century. There are, at most, only the beginnings of such an idea at that time. Equally hazy in the sixteenth century, if not more so, was the concept of what constituted a ship. How large did a vessel have to be, for example, before enumerators considered it worth counting? Equally important, how big did it have to be to make it worth counting as part of the maritime strength of a state? Also unclear was which state or jurisdiction could claim a vessel. Contemporaries may have had loyalties to their own port or to some larger political unit. In addition, many political divisions appeared during or even after the era of sail. The English and Scottish merchant marines were counted separately, although the two kingdoms went through changing relationships in the period. Both Germany and Italy existed in the minds of Europeans in the age of sail, but as political units they only emerged in the 1860s. To attach a figure for the size of a merchant marine to, say, Germany in the seventeenth century would have been little more than a curiosity to contemporaries.

The standard of measure presents problems as well. The carrying capacity of ships is measured in tons, obviously. But tonnage is a difficult concept. It is perhaps some comfort that shipbuilders and officials in the fourteenth through the eighteenth century were also confused about what tonnage meant. Since 1854 the gross registered ton has been fixed at one hundred cubic feet or 2.83 cubic meters of enclosed space. It is a measure of volume, of the carrying capacity of a vessel. Unfortunately, there are at least four other measures of tonnage applied to ships.[8] The measure chosen to compare fleets in the age of sail is metric tons burden, which is equal to deadweight tonnage. Contemporary measures are then converted to tons burden. The principal reason for the choice of deadweight tonnage was that, by the sixteenth century, commonly used measures were roughly comparable to modern measures of deadweight tonnage.[9] Contemporary measurements were never highly accurate since methods for calculation were simple. The usual and most reliable way to find out the tonnage of a ship was to load it and see how much it could hold. Typically, tonnages were rounded off for the sake of simplicity, often at the expense of accuracy. Errors of measurement are made worse by the summing of reported figures and also by approximations made now on the basis of approximations made at the time.

II

Despite all the problems of uncertainty about what is being measured, about the units of measure and about the accuracy of the data, it is still possible to generate figures, even with a sizeable margin of error, which show a consistency and which reveal the broad general trends in European shipping in the period. To show the method for developing estimates and also to establish the basis for comparison with other places and other times, as well as to illustrate the problems in dealing with the interpretation of resulting data, the first estimates are generated for the reign of Queen Elizabeth I of England. That is the best-known period, where the documentation is the most complete and where the role of the state is most clear. Surveys carried out in Elizabeth's reign show that English shipowners became committed to large defensible ships, a choice in part dictated by economic circumstances, in part by existing technology, and in part by a government policy which promoted shipbuilding and especially the building of cargo ships which were also able to act as warships. It is virtually impossible to say which factor was the most important in determining the path followed by the English merchant marine.

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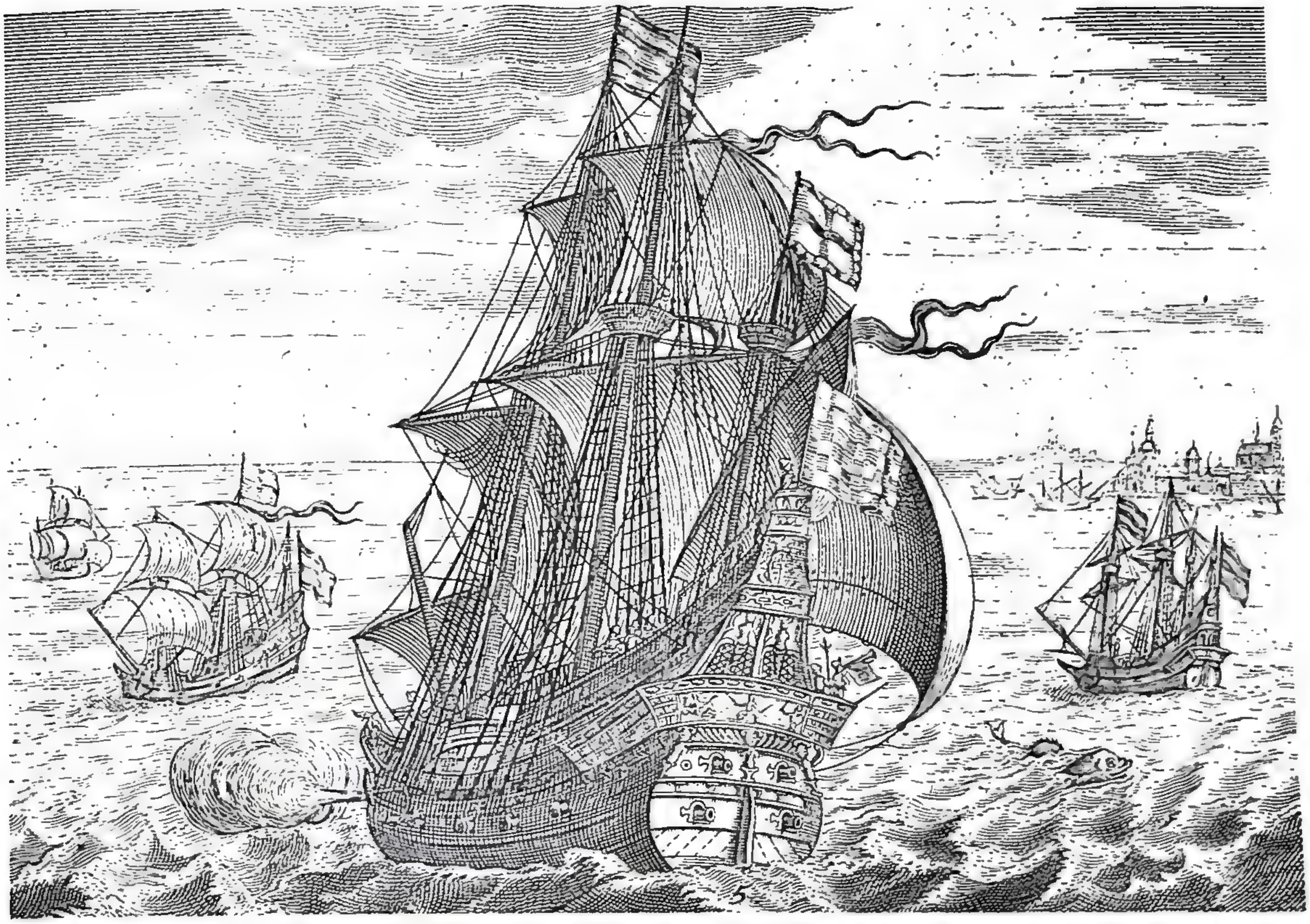
8. The four others are: displacement tonnage, which is the amount of sea water displaced by the vessel either empty or loaded; deadweight tonnage, which is the difference between light displaced and displacement loaded and so is equal to the weight of cargo; freight tonnage, which is the volume a ship can carry, one measurement freight ton being equal to 1.13 cubic meters; and registered tonnage, which is tonnage based on some calculation using the principle measures of ships. Two examples are the English registered ton of the seventeenth century, changed in 1696 and again in 1773, which was a proportion of the measured tonnage, and the Spanish *tonelada* of the sixteenth century, which from 1570 on was equal to 2.6 cubic meters. All of those measures of tonnage and variations on them were known before, during, and after the sixteenth century.

9. Tons burden was derived from practice in the Bordeaux wine trade, where one cask or ton was equal to 960 kilograms plus the weight of the cask, or about 1,000 kilograms or 2,200 English pounds (one metric ton equals 2,240.6 pounds). The wine barrels of 2,200 pounds took up about forty-two cubic feet and a modern "freight ton" is equal to forty cubic feet. Similarly, in Italy the wine cask was used for estimating the size of ships: *botta*, or *botte*, or *boute*, the same as the English butt, though the size of the butt varied from town to town. Shippers in the North (that is, in England) equated the ton with forty cubic feet (1.13 cubic meters) while in the Mediterranean it tended to be fifty-one cubic feet (1.44 cubic meters) because builders in the South included more space for lighter cargo. In the Baltic and North seas, ships were rated by lasts, the last being a weight of grain equal to about 2,000 kilograms. By the seventeenth century the last was 112 cubic feet (3.2 cubic meters). If that was the case, then the specific gravity of the cargo was .63. Jean-Baptiste Colbert, the minister of Louis XIV, standardized the measure in France at the *tonneau* of 979 kilograms, equal to 2,158 English pounds. See F. C. Lane, "Tonnages, Medieval and Modern," *Economic History Review* 2d series, 17 (1964): 213-229; A. van Driel, *Tonnage Measurement: Historical and Critical Essay* (The Hague, 1925), 6-11; W. Salisbury, "Early Tonnage Measurement in England," *The Mariner's Mirror* 52 (1963): 41-51; and Christopher J. French, "Eighteenth-Century Shipping Tonnage Measurements," *Journal of Economic History*, 2d series, 33 (1973): 434-435.



This seventeenth-century engraving by Claes Jansz. Visscher shows the *Griffin*, a heavily armed fighting ship from the reign of Elizabeth I. Courtesy of the National Maritime Museum, London.

Economic circumstances changed with the changes in English trade during the second half of the sixteenth century. The different demands placed on shipping certainly had to affect the size and character of the merchant marine. In 1558 most English trade went through the port of London to the Low Countries, overwhelmingly to Antwerp. By 1603, however, English traders had expanded their range to a wider variety of Channel, North Sea, and Baltic ports. They also ventured to the New World and the Orient. On average, by 1603 the goods carried were of greater value per unit volume and were moved over longer distances than at the start of Elizabeth's reign.[10]

The shipbuilding technology of the sixteenth and seventeenth centuries created opportunities for governments to influence the character of ships constructed. The explanation for this development lies in the increasing differentiation between ships for violence and ships for peaceful trading. In the high Middle Ages, the cog was the dominant type of ship used for war in northern Europe. It was also the most efficient long-distance carrier of trade goods. But in the years around 1400 a new type, the full-rigged ship, appeared. It combined square sails and the triangular lateen sail which had long been in common use

10. G. D. Ramsay, *The City of London in international politics at the accession of Elizabeth Tudor* (Manchester, 1975), vii, and G. D. Ramsay, ed., *The Politics of a Tudor Merchant Adventurer: A letter to the Earls of East Friesland* (Manchester, 1979), 58-66; Ralph Davis, *English Overseas Trade 1500-1700* (London, 1973), 9; Jan K. Federowicz, "Anglo-Polish Commercial Relations in the First Half of the Seventeenth Century," *Journal of European Economic History* 5 (1976): 365-368; and Peter Ramsey, *Tudor Economic Problems* (London, 1963), 76-78. George Nedham, a London merchant writing in 1564, talks about the rise of Antwerp and how it has taken over the trade of all nations and funneled that trade through its port. Burghley, Lord Treasurer to Elizabeth I, writing ca. 1581 and perhaps overestimating the earlier history of English commerce, said: "The navy of england was hertofore occupyed by merchantes into Levant, to spayn, to portyngall, and now the commoditees which english shippes wer accustomed to bryng thence is for the most part fovnd in Antwerp, from which place on hoye will bryng as much in one yere as x merchantes shippes war wont to bryng from the other placees in ij yers." R. H. Tawney and Eileen Power, eds., *Tudor Economic Documents*, vol. 2 (London, 1924), 125.

in the Mediterranean. The new type of ship, because of the combined rig, was more maneuverable than its single-masted predecessors with no sacrifice in size. The new type also embodied a form of hull construction new to northern Europe but known in the south since the end of the first millennium. Skeleton building, with internal frames set up before the hull planks were tacked onto those frames, made possible both lighter and bigger ships with no loss of security. The new ship type created opportunities for developing a more effective naval vessel, since the full-rigged ship proved to be an effective vehicle for carrying guns on board. By the late fifteenth century, guns were made large enough, accurate enough, and reliable enough to take up an important place in naval warfare.[11] In the last years of the sixteenth century, the many small anti-personnel weapons used to sweep decks of the enemy in preparation for boarding were replaced, as were the few large bronze guns, by many relatively inexpensive and now reliable iron guns.

As a result, by the middle of the seventeenth century broadside sailing ships dominated naval activity and the navies of Europe. Guns, combined with the design of the full-rigged ship, proved the technical basis for the separation of warships from cargo ships in the course of the seventeenth century. Until that distinction became complete it was still possible, using the design of the full-rigged ship and guns of both bronze and iron, to get an economically viable sailing cargo ship which was at the same time defensible and an effective naval vessel.[12] So long as that was true, in the fifteenth, sixteenth, and early seventeenth centuries governments often took an active role in directing shipbuilding to get merchant vessels of greater size able to carry guns and so able to be pressed into naval service in wartime. In the reign of Elizabeth I, the English government recognized and seized the opportunity created by the state of maritime technology to direct shipbuilding. Other states followed the same practice both before and after the English embarked on such policies.

Elizabeth's government expected three major gains from the range of policies designed to promote growth of the merchant marine: first, that more ships would earn more foreign exchange, making it easier to pay for England's large and critical imports of military supplies;[13] second, that an increase in the number of skilled seamen would create a source of crews for naval vessels in wartime; and third, that properly built new merchant ships could be converted for naval use. That expectation could not have been fulfilled in the following century, since by then ships and shipping had changed, and cargo ships were very different from warships.

The primary concern of the English government in the second half of the sixteenth century was unquestionably defense. It was that overwhelming concern for protection of the realm which directed the government in most actions, both political and economic. Elizabeth's Privy Council ". . . worked under relentless pressure of war and fear of war. . . . Permeating practically all of its major economic considerations was the idea of how best to avoid problems that would threaten 'if warres should chance.'" A program of rearmament was at base the reason for the extensive effort to expand and improve English shipping.[14] There were acts to force goods onto English-built and English-operated ships. From 1563, foreigners were excluded from coastal trades, the most important being the shipping of coal from Newcastle to London. There were attempts to increase fish consumption — the so-called political Lent — and a general encouragement of the fishing industry. In 1540 the English merchant marine was not large enough to carry all of England's trade, and the government, using these and other measures, planned to change that.

One policy among the many designed to promote and direct merchant shipping and shipbuilding was a subsidy program for the construction of larger ships. Such payments were not new to the England of Elizabeth I nor to sixteenth-century Europe. In the reign of King Henry VIII (1509-1547) the English state had paid five shillings per ton for every ship built of one hundred tons or more. In 1540 that would have been equal to about one-sixth of the total building cost. The proportion was to fall over time in real terms, since the cost of construction rose while the subsidy per ton remained constant. Grants to builders continued until early in the eighteenth century, with increasing restrictions to ever larger vessels. Elizabethan bounties were the only general construction bounties ever granted in Britain.[15]

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11. Richard W. Unger, *The Ship in the Medieval Economy 600-1600* (London, 1980), 231-234.

12. Ibid., 163-166; Richard W. Unger, "Warships and Cargo Ships in Medieval Europe," *Technology and Culture* 22 (1981): 233-252; Peter Padfield, *Guns at Sea: a history of naval gunnery* (London, 1973), 33-43.

13. Lawrence Stone, "State Control in Sixteenth-Century England," *Economic History Review* 17 (1947): 111; Edwin M. Bacon, *Manual of Navigation Laws* (Chicago, 1912), 12-15; Sybil M. Jack, *Trade and Industry in Tudor and Stuart England* (London, 1977), 97-8. The government in 1558 was concerned about reliance on imports of armaments from Germany through the Netherlands and so also set out to develop native mining and metallurgical industries to reduce their dependence on foreign suppliers. Ramsay, *The City of London*, 115-116; Vincent Ponko, Jr., "The Privy Council and the Spirit of Elizabethan Economic Management, 1558-1603," *Transactions of the American Philosophical Society*, New Series, 58, no. 4 (1968): 57.

14. Ponko, "The Privy Council and the Spirit of Elizabethan Economic Management," 56-57.

15. Oppenheim, *Administration of the Royal Navy*, 38, 88, 107, 167-168, 472; Royal Meeker, *History of Shipping Subsidies* (New York,

In the last years of the fifteenth and first years of the sixteenth century, the Venetian government had a similar policy goal — that is, to get big ships with naval potential. In Venice, direct subsidies proved an insufficient incentive to get the large sailing ships the Venetians needed to send against the Ottoman Turks. Instead, the government ended up building ships itself and then fixing freight rates to favor the large sailing ships so that they could pay their way in peacetime. Genoa granted similar construction subsidies for building large ships in the late fifteenth century. The Spanish government did the same in the sixteenth, though in the reign of the Emperor Charles V there was a break in the practice. King Philip II raised the subsidy in 1563 when he perceived a fall in domestic production of big ships. The government raised the subsidy again in 1597 for ships suitable for trade to the Indies. From 1584, the French crown as well made grants for the building of ships over three hundred tons.[16]

Thus, subsidies for construction to direct the character of merchant marines were common in Europe in the fifteenth and especially in the sixteenth and seventeenth centuries. Those policies squarely established the involvement of governments in shipbuilding. One result was surveys to see if the efforts to promote shipping and to direct shipbuilding toward the construction of big ships had been effective. The surveys, at least for England, suggest that subsidy programs were successful.

The first English shipping survey dates from 1560, the second from 1568, the next from 1571-1572, the next from either 1576 or 1577, the next from 1582, and the next, which is a limited survey of the Cinque Ports, from 1587. There is as well a survey from the reign of Charles I done in 1626. Most of the surveys of merchant ships were associated with some crisis, internal or external, in English politics. For example, the report of 1568 came one year after a Spanish army under the Duke of Alba had entered the Low Countries. The 1571-1572 survey coincided with the Ridolfi plot and the height of fears for the security of Elizabeth's throne. There was also another trade depression. The catalogue of merchant ships done in either 1576 or 1577 came as the temporary settlement in the Low Countries had broken down and Elizabeth found herself aiding the rebels against the Spanish monarch.

The Elizabethan surveys show, first, the total tonnage of the English merchant marine, and second, the proportion of big ships, vessels of one hundred tons or more, in the merchant marine. The most comprehensive was that of 1571-1572, which gave the tonnage of each ship trading from English ports. It is possible to use those figures to calculate the total tonnage in various size categories and the share of the total tonnage which can be attributed to each category. The 1571-1572 survey offers a good first approximation and a contemporary set of multipliers to use in estimating the total size of the English merchant marine based on the evidence in the other surveys. In 1571-1572, eighty-six of the 1,383 ships, or 6.2 percent, were of one hundred tons or more, but those same eighty-six formed 22.7 percent of total tonnage, which was 51,912 tons. Similarly, vessels of from six to forty-nine tons, 1,032 of them in all, were 74.6 percent of the total of ships but contributed only 45.5 percent of total tonnage.

The first report of 1560 covered only ships of one hundred tons and more. The government was obviously worried about the availability of large and powerful ships. Extrapolating, using the 1571-1572 proportions, and assuming ratios were about the same in 1560, the 1560 survey suggests that total tonnage of the merchant fleet was over 45,000 tons.[17] Similarly, the second survey of 1568, using 1571-1572 multipliers, yields a total for the English merchant fleet of about 65,000 tons. The 1577 return, a list of all English ships of one hundred tons and over, probably has a few gaps because certain ships were left out. By 1577, the total of large vessels was up to at least 135 from the eighty-six of 1571-1572, with an average tonnage of 131 tons. The same method yields an estimate for the entire merchant marine of almost 78,000 tons. The expansion in total carrying capacity reflected the improved fortunes of the cloth trade as well as the growth of trade to new areas: the Mediterranean, Russia, and the New World.[18]

1905), 1-4; Edwin M. Bacon, *Manual of Ship Subsidies* (Chicago, 1911), 11-12; Jack, *Trade and Industry*, 97; Brian Dietz, "The Royal Bounty and English Merchant Shipping in the Sixteenth and Seventeenth Centuries," *The Mariner's Mirror* 77 (1991): 5-20.

16. F. C. Lane, *Navires et Constructeurs à Venise pendant la Renaissance* (Paris, 1965), 99-105; Charles de la Roncière, *Histoire de la Marine Française*, vol. 1 (Paris, 1909-1920), 245; S. B. Clough and C. W. Cole, *Economic History of Europe* (Boston, 1946), 217; A. P. Usher, "Spanish Ships and Shipping in the Sixteenth and Seventeenth Centuries," in *Facts and Factors in Economic History, Articles by Former Students of Edwin Francis Gay* (Cambridge, MA, 1932), 192-194, and Earl J. Hamilton, "Spanish Mercantilism before 1700," in *Facts and Factors in Economic History*, 235-236.

17. Public Record Office, London, State Papers, Domestic, Addenda, Elizabeth I, 15/22/1 (1571-1572); Oppenheim, *Administration of the Royal Navy*, 172, and "The Royal Navy and Merchant Navy under Elizabeth," *English Historical Review* 6 (1891): 472.

18. British Library, Stowe MSS 570, fol. 151; Oppenheim, *Administration of the Royal Navy*, 173; F. J. Fisher, "Commercial Trends and Policy in Sixteenth-Century England," *Economic History Review* 10 (1940): 96-97. Fisher's figures come from the data reported by William Harrison in Frederick J. Furnivall, ed., *Harrison's Description of England in Shakspere's Youth*, New Shakspere Society, series 6, part 1, no. 5, (London, 1877), 290. It is also the estimate used by Vogel, "Zur Grosse der europäischen Handelsflotten," 321.

Table 1
Tonnage of the English Merchant Marine 1560-1629

Year	Ships over 100 tons		Estimated tonnage of all ships
	Number	Total tonnage	
1560	76	10,360	45,000
1562	73*		65,000
1571-2	86	11,784	51,912
1577	135	17,670	78,000
1582	177	24,150	80,000
1583	183	25,000**	90,000
—	—	—	—
1629	323		115,000

*Major ports not included
**This is a minimum

The 1582 survey showed 177 ships of one hundred tons and more, a marked rise from the seventy-six of 1560 or even the 135 of 1577. The total tonnage of big ships was at least 24,150 tons, an increase of 133 percent over the 10,360 tons of the first Elizabethan report. The total tonnage of the entire English merchant fleet in 1583 was almost 80,000 tons, if the method of estimating is accurate. A survey by county in 1583 demonstrated the same general trends. Extrapolating as with the other figures, we derive a total tonnage estimate for the entire fleet in 1583 at close to 90,000 tons. The proportion of tonnage attributable to ships of one hundred tons or more, a total of 183 ships, had risen from under 23 percent in 1571-2 to over 28 percent in 1583. The 1583 list is the last comprehensive one before 1629.[19] There is no doubt that the total size of the English merchant marine grew in the reign of Elizabeth I. There is also no doubt that the proportion of large ships grew. The presence of alternative uses for large ships in a number of trades, in naval operations, and in privateering made it more likely that such vessels could return a profit to their owners and so made it more likely that they would be built.

III

While at its height the Elizabethan merchant fleet probably reached 90,000 tons, it was still small by modern standards and, even more significant, it was not impressive compared to figures from the Middle Ages. It was also not impressive compared to contemporary Holland or major northern Italian port towns. However, the pattern of growth and the distribution of tonnage established during the second half of the sixteenth century in England was similar to the pattern followed elsewhere in Europe both before and after the time of Elizabeth I.

For medieval shipping there are no government surveys — there was no government interested in directing shipbuilding — so data must come from trade figures. In the Mediterranean, government yards, or arsenals, built warships. In the North, merchants had cogs built without government help. There were few tolls for which records survive and even fewer regulated trades, so data are scarce. The Bordeaux wine trade offers one of the few sources. In the early years of the fourteenth century the average annual export of wine from Bordeaux was over 80,000 tons. English ships probably carried more than 33,000 tons of that wine. If that was the case, then it is doubtful that the entire English merchant fleet, including coastal shipping, was less than twice that size. It was then probably over 70,000 tons. Moreover, the Bordeaux customs accounts suggest that the proportion of English ships of one hundred tons and more was greater in the early fourteenth century than in the late sixteenth, but that may be because the Bordeaux wine trade involved the use of relatively large ships. In the early fourteenth century, shippers called Normans by the customs collectors carried more than 18,000 tons of wine each year out of Bordeaux. Using a similar multiplier for them, the total merchant fleet for the area which would come to be called France

19. Jack, *Trade and Industry*, 98, reports a tonnage estimate for 1629 which is presumably based on the 1626 survey.

Scenes from a Venice panorama, from B. von Breydenbach, *Bevaerden tot dat heilghe grafft*, 1488. Courtesy of the National Maritime Museum, London.

was probably at least 40,000 tons.[20] The Bordeaux wine trade, a large-volume trade in a bulky commodity, collapsed in the second half of the fourteenth century. The collapse caused a marked fall in the total size of the English merchant marine and presumably in the average size of English ships as well.

In the fifteenth century it appears that there was a widespread movement toward smaller ships.[21] The Italian merchant republics tried to overcome that trend and to promote an increase in the size of their ships. In 1424, Genoa did a survey to find out the total tonnage of big ships. The government was concerned not with the size of the whole merchant fleet but only with how many large ships could be deployed. For Genoa, large meant ships of five hundred tons or more. Around 1450, Venice also took an interest in the proportion of large ships. A survey showed that some 19 percent of the total tonnage was in ships of 240 tons or above, but more than 50 percent of the tonnage came from ships of one hundred tons or better and only 9 percent of ships fell into that category.[22] By the late sixteenth century, the combination of economic and political pressure had reversed the earlier trend, and there were more and more big ships everywhere in Europe.

The Dutch had the largest merchant fleet in Europe in the seventeenth century. An estimate for 1636, based on statements made in the Dutch States-General, put the total tonnage for the Dutch Republic between 600,000 and 700,000. The large figure included a sharp rise in the

20. Margery K. James, "The Fluctuations of the Anglo-Gascon Wine Trade during the Fourteenth Century," in E. M. Carus-Wilson, ed., *Essays in Economic History*, vol. 2 (New York, 1962), 130, 146-147; Yves Renouard, "Les transformations économiques et sociales," in Charles Higounet, ed., *Bordeaux sous les Rois d'Angleterre*, vol. 3 of *Histoire de Bordeaux* (Bordeaux, 1965), 423-424, 429, and Renouard, "L'exportation des vins gascons," in *Bordeaux sous les Rois d'Angleterre*, 254-257. For some additional data on medieval shipping, see the survey of 1,291 ships in Timothy J. Runyan, "Ships and Fleets in Anglo-French Warfare, 1337-1360," *The American Neptune* 46, no. 2 (Spring 1986): 91-99.

21. Geoffrey V. Scammell, "English Merchant Shipping at the End of the Middle Ages: Some East Coast Evidence," *Economic History Review*, 2d series, 13 (1961): 331-334.

22. Lane, *Navires et Constructeurs*, 95.

average size of Dutch ships from the 1570s to the 1630s.[23] Around 1600, then, when the English fleet was about 90,000 tons, the Dutch fleet was at least above 300,000 tons. The report of a survey from 1629 shows that while the English fleet had grown some 28 percent in the intervening years to 115,000 tons, the Dutch had grown 100 percent to 600,000 tons. In 1600 the Dutch fleet was three times the size of the English, but by 1630 it was six times the size of its English counterpart. England was not alone. The Dutch merchant fleet grew rapidly relative to all other fleets in Europe in the late sixteenth and early seventeenth centuries.

In 1636 the Dutch merchant fleet boasted 1,750 ships in service in commercial navigation in European waters, including the Mediterranean. Thirteen hundred of those ships were rated at over eighty tons. The average tonnage of all ships in the estimate was just under 177 tons, up dramatically from the average of thirty-nine tons for all English ships in the survey of 1571-1572. It appears that there was a dramatic change in the period from 1570 to 1636 in the size of ships. The Dutch specialized in a different kind of trade, carrying bulk goods, principally grain, from areas of surplus and low production costs to markets in western and southern Europe. At the same time, Dutch merchants and shippers moved into more distant trades in the Far East and the New World where larger ships were typical. By 1636 the Dutch fleet was highly diversified but still dominated by slow-moving, lightly built and lightly armed cargo ships designed for the carriage of bulk goods. It was a different kind of merchant marine, with vessels which could never be used as warships. The rapid growth of the Dutch fleet and Dutch success in exploiting rapidly growing trades helps to explain the English concern and confusion in the late sixteenth century about their own merchant marine. It was not until the second half of the eighteenth century that the English merchant fleet would reach the size of the Dutch of 150 years before.[24]

The same was true of Spain and Portugal. When Philip II had united the two crowns in the 1580s, the combined fleet was smaller than the Dutch but still more than twice the size of the English or the French; that is, it was in excess of 200,000 tons.[25] For one Spanish trade there is extensive data on ship size because it was so carefully and so closely regulated. By the late sixteenth century an annual average of some 150 to 200 ships were involved in the Indies trade, the trade to the New World. The total tonnage in the trade ran to some 15,000 to 20,000 tons each year, so the average size of ships was about one hundred tons. In the 1520s there were nearly one hundred ships per year, with a total carrying capacity of 4,500 tons, carrying goods across the Atlantic between Spain and her American outposts; thus, the average tonnage of the ships was forty-five tons.[26] In the course of the century, both the number of ships and the average size of the ships doubled, which led to a four-fold increase in carrying capacity in that trade alone. The vessels used in the Indies trade were highly defensible, so the Spanish crown got exactly the result desired.

The capacity of the combined fleets of Spain and Portugal appears to have been much the same in the late eighteenth century as it was in the late sixteenth. The 1786-1787 tonnage for Spain was 149,460 tons and for Portugal 84,843 tons. The two kingdoms had separated long before, of course, so combining the two figures for the later date is misleading. More misleading may be the similarity of the 1585 and the 1786-1787 figures, which probably masks a significant fall in the size of the merchant fleets of the two kingdoms in the course of the seventeenth century. There was discussion of a revival in shipping and shipbuilding, especially in Spain, in the course of the eighteenth century. The 1786-1787 figure could reflect a long-term recovery with Spain and Portugal finally, at the end of the eighteenth century, reaching the levels of shipping of two hundred years before.

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23. On the size of the Dutch fleet, see Aksel E. Christensen, *Dutch Trade to the Baltic about 1600* (The Hague, 1941), 93-94, 444-447; Maria Bogucka, "Amsterdam and the Baltic in the First Half of the Seventeenth Century," *Economic History Review*, 2d series, 26 (1973): 437; S. C. van Kampen, *De Rotterdamse Particuliere Scheepsbouw in de Tijd van de Republiek* (Assen, 1953), 75-76; Richard W. Unger, *Dutch Shipbuilding before 1800* (Assen, 1978), 11.

24. Jonathan I. Israel, *Dutch Primacy in World Trade, 1585-1740* (Oxford, 1989), 6-10, 408-411. Though he argues that ". . . the view that bulk freightage was the key to general primacy in world commerce has never seemed wholly convincing" (p. 9), he does agree that one of the pillars and indeed a critical pillar of Dutch primacy in world trade was her massive shipping capacity (e.g., p. 411) which was largely in bulk carriers. See also A. P. Usher, "The Growth of English Shipping 1572-1927," *Quarterly Journal of Economics* 42 (1927): 467. He gives official tonnage figures which are probably low since coasters and small craft may well have been left out, but then the same problem exists for data from the sixteenth century. As late as 1701 the official tonnage of the English merchant fleet was still only 261,222, well below the estimate by Ralph Davis for 1702 which makes allowance for vessels not included in the returns. See table 2 on pages 260-261.

25. On the size of the Spanish fleet, see Usher, "Spanish Ships and Shipping," 211-212. The estimate is highly suspect on a number of grounds, including the conversion of the contemporary Spanish measure, the *tonelada*. Pierre Chaunu, "La Tonelada Espagnole aux XVIe et XVIIe Siècles," in Michel Mollat, ed., *Travaux du [Première] Colloque d'histoire maritime (1956)* (Paris, 1957), 71-81; Earl J. Hamilton, "The Decline of Spain," in E. M. Carus-Wilson, ed., *Essays in Economic History*, vol. 1 (London: Edward Arnold, 1954), 215.

26. Huguette and Pierre Chaunu, *Seville et l'Atlantique*, vol. 6, pt. 1 (Paris, 1953-1959), 168, 337.

Portuguese carracks off Sintra, Portugal, by Cornelius Anthoniszoon, ca. 1540. National Maritime Museum, London.

The fleets of Mediterranean states offer even less in the way of reliable estimates of their size. Fernand Braudel, the historian of the Mediterranean in the time of Philip II, put total shipping capacity there in the late sixteenth century at about 350,000 tons.[27] He also gave a figure of 600,000 to 700,000 tons for all maritime activities in the Atlantic, including fishing, for the same period. In light of other data, his estimate for the Mediterranean appears to be too high and the figure for the Atlantic too low. The latter seems especially low given Dutch and English data. The former may be more accurate, however, since the Italian merchant republics certainly deployed large fleets. Fifteenth-century Venice already had over 80,000 tons of shipping, and the fleet was probably as big or bigger in the early fourteenth century.

As to the ports of what would become the German Empire after 1871, the estimates made by Vogel are perhaps a bit too optimistic. In the thirteenth and early fourteenth centuries, the fleet of the towns which belonged to the Hanseatic League was undoubtedly very large. The political and naval power of the League as well as incidental comments suggest not only that the fleet was large but also that many of the ships in the fleet were large — that is, of two hundred tons or more. The beer trade from Hamburg to Amsterdam in the 1360s alone required a minimum of 1,500 tons of shipping, and by the late fifteenth century 4,000 tons were needed. That trade was only a small part of the total of Hanseatic commerce. It appears that in the 1590s League ports had somewhere around 100,000 tons of shipping in long-range ocean-going commerce alone.[28] All indications are of a rise and recovery in total tonnage in the sixteenth century followed by stagnation in German ports, and for that matter throughout Europe, in the seventeenth century.

IV

In the eighteenth century, the tonnage of the Dutch merchant fleet remained stable. A 1700 estimate put 1,600 Dutch ships in European commerce, and an estimate for 1750 was 1,450. Those approximations are based on contemporary guesses. The total number of ships had fallen from 1,750 in 1636, but it is possible that the average size of vessels had risen, possibly even enough to compensate for the fall in the number of ships. If the total tonnage of the Dutch fleet fell in the eighteenth century, it was not by much. Around 1750, 4,400 ships entered Dutch ports each year, and by 1790 that figure had reached 5,500. The total included vessels in European trades, in whaling, and in trade to the East and West Indies.[29]

27. Fernand Braudel, *The Mediterranean and the Mediterranean World in the Age of Philip II*, vol. 1, trans. Siân Reynolds (New York, 1972), 445-448.

28. On the German fleet, see Vogel, "Zur Grosse der europäischen Handelsflotten," 273-302.

29. Bruijn, "Recrutement et enrôlement dans la marine marchande," 553.

While there may have been little change in the total tonnage of the Dutch fleet, there was a great rise in tonnage of the English fleet. The date for the rapid expansion of the English merchant marine is rather late and, indeed, comes just on the eve of the introduction of steam power. It is true that the wars of the eighteenth century and especially the wars of the French Revolution and Napoleon skew the figures. Even more important was the change in the government method of measuring shipping tonnage made in 1773 and enforced from 1786. Even reducing the official post-1786 figures for registered tonnage by one-third — a likely multiplier — in order to make them comparable with earlier numbers, the British gains in the late eighteenth century are still impressive.[30] By any measure the fleet more than doubled between the 1760s and the 1790s. The rapid growth in the English merchant marine made the total figure for Europe rise rapidly as well. The proportion of shipping attributable to England in 1786, however, was still less than the Dutch share of the total in the mid-seventeenth century. That did change rapidly, though, in the 1790s.

By the eighteenth century, Denmark-Norway was also making a significant contribution to Europe's total tonnage with a merchant marine almost as large as that of the Dutch Republic. The 1786-1787 figure of 386,020 tons suggests rapid growth in the preceding century. While the English fleet grew in size at an impressive pace through the eighteenth century, the rate of growth for Denmark-Norway, though admittedly starting from a smaller base, was at least as high or higher. While France was generally keeping pace with English growth and German ports were falling behind the rate of expansion set by England, Norway was able to establish a position as a major supplier of shipping services internationally. The British colonies in the New World did much the same thing in the eighteenth century. In the years 1769, 1770, and 1771, the average annual output of shipbuilding yards in what was to become the United States was over 21,000 tons, much of the production being exported to Britain. On the eve of the American War of Independence, British North America boasted by one estimate a merchant marine of over 450,000 tons, 250,000 of those tons in a coastal fleet of 5,200 vessels.[31] Not only the size but also the geographical scope of Europe's shipping grew rapidly in the eighteenth century as other parts of the world were integrated into the complex of trade and navigation.

30. Davis, *The Rise of the English Shipping Industry*, 395-396; French, "Eighteenth-Century Shipping Tonnage Measurements," 434-437.

31. James F. Shepherd and Gary M. Walton, *Shipping, Maritime Trade, and the Economic Development of Colonial North America* (Cambridge, 1972), 243; Fernand Braudel, *Civilization and Capitalism 15th - 18th Century*, vol. 3, trans. Siân Reynolds (London, 1984), 462.

For the total tonnage of all of Europe's merchant fleets, only a figure from the survey carried out by French consular officials in 1786 and 1787 can be given any credence. That survey gave an estimate for the total capacity of all the fleets of Europe of 3.5 million French tons, a French ton being 979 kilograms.[32] The 1676 estimate of just two million tons given by Sir William Petty in his *Political Arithmetick* is certainly questionable. He contradicted his own estimate of the size of the English fleet in the same book, giving in one case 500,000 tons and in the other 600,000.[33] Fernand Braudel offers an estimate for the total for all of Europe in 1600 of 700,000 tons, which is certainly too low.[34] It seems likely that by 1600 the European fleet was already up to around one million tons, grew to 1.5 million tons by the 1670s, and then, after a long-term sustained rise, reached 3.5 million tons by the closing years of the eighteenth century.

The 1786-1787 survey also shows that another trend dating from the reign of Elizabeth I and before had continued. The share of large ships in the merchant fleet had continued to grow. The French consular survey showed 3 percent of all vessels being over two hundred tons with those vessels comprising 31 percent of the total tonnage. Ships of one hundred to five hundred tons formed a minimum of 67 percent of the total tonnage of Europe's merchant fleet. In the course of the four centuries after the development of the full-rigged ship, European shipbuilders and shippers had discovered, by experiment and with government direction, the optimum size for the sailing ship. That size was somewhere around four hundred tons.

Data on the size of European merchant marines from the late Middle Ages to the end of the eighteenth century yield many well-known and predictable results. The total tonnage of European shipping grew over the long term, but that growth was not continuous. Rather, there were wide swings, up and down, in the total tonnage. There was a sustained rise in the fifteenth and sixteenth centuries and then slower growth through the seventeenth and early eighteenth centuries. Sixteenth-century levels indicated a recovery from a medieval high, but how high that medieval level may have been is hard to tell. In 1600 Europe may have just gotten back to medieval tonnage. It is true that late sixteenth-century ships were technically

32. Ruggerio Romano, "Per una valutazione della flotta mercantile europea ala fine del secolo XVIII," in *Studi in onore di Amintore Fanfani*, 6 vols. (Milan, 1962), 5: 578-80.

33. Sir William Petty, *Political Arithmetick or a Discourse Concerning The Extent and Value of Lands, People, Buildings; Husbandry, Manufacture, Commerce. . .* (London, 1690), 5. On page 5 England has 500,000 tons of shipping and on page 77 it is 600,000.

34. Braudel, *Civilization and Capitalism 15th-18th Century*, vol. 1, trans. Siân Reynolds (London, 1981), 362.

Convoy of Dutch cargo ships escorted by a warship (center), from a painting by an unknown seventeenth-century Dutch artist. Courtesy of the Museum of Fine Arts, Budapest.

better and more efficient than their medieval counterparts, so each ton of shipping could give more transport service in a given period of time by 1600. Even if tonnage levels were the same in 1300 as in 1600, there were greater shipping services available in 1600.

Rapid expansion of tonnage began after 1750; that is, on the eve of the introduction of steam propulsion. By the late eighteenth century tonnage in Europe's merchant marine far exceeded anything seen before. By that time, the transfer to northwest Europe in shipping was obvious as well. That shift had been, first, from northeast and central Europe in the fifteenth and sixteenth centuries and, second, from the Mediterranean in the very late sixteenth and in the seventeenth and eighteenth centuries.

The long-term increase in the number of large ships is obvious from the data. The trend began in the Mediterranean, in Venice and Genoa in the fifteenth century with the introduction of the three-masted carrack, a large version of the full-rigged ship. Northern Europeans followed the example, imitating their counterparts in the south. The new big ships dragged up the average size of ships as well as increasing the total tonnage. In northern Europe, the Netherlands was a partial exception since, though Dutch shippers had defensible ships for dangerous trades in high value goods, the great majority of their vessels were designed and intended for bulk carriage. Dutch figures, however, show the same tendencies toward a rising total tonnage and higher average tonnage because the merchant fleet was large and because few vessels were either very large or very small. English shipowners, on the other hand, concentrated on a smaller number of big ships in the late sixteenth century.

The goal of English state policy was to direct shipping into trades which were relatively dangerous and so away from bulk trades. Government action in the 1560s and 1570s helped to commit England to a relatively small fleet, relatively large ships, and relatively high costs of operating those highly defensible ships. Other states followed similar courses. In the reign of Elizabeth I those in positions of power had an overwhelming interest in defense and in regulating the economy to promote self-sufficiency, which was understood to be essential to that defense.[35] Construction of large ships fit that overriding interest. The rearmament policy, of which treatment of the merchant marine was an integral part, left a legacy of high-cost carriers. It was not until the eighteenth century that the English merchant marine escaped the choices made, for reasons of defense, in the second half of the sixteenth. The Dutch merchant marine, on the other hand,

35. Christopher Hill, *Reformation to Industrial Revolution* (London, 1967), 73; Lawrence Stone, *The Crisis of the Aristocracy 1558-1641* (Oxford, 1965), 425. The landed classes supported legislation for regulating the economy because of their fear of change and social unrest but above all because of their concern for defense. See also Penelope Corfield, "Economic Issues and Ideologies," in Conrad Russell, ed., *The Origins of the English Civil War* (London, 1973), 198, and Ramsey, *Tudor Economic Problems*, 165-167.

Table 2
Tonnage of Merchant Marines in Europe, 1300-1800

Year	England	Dutch Republic	Germany	France	Spain & Portugal	Italy	Venice	Genoa	Denmark-Norway & Sweden
1310[36]	70,000			40,000					
1424[37]								31,000	
ca. 1450[38]							80,500		
ca. 1470[39]		60,000	60,000						
1560[40]	45,000								
1562[41]	65,000								
1567[42]		175,000							
ca. 1567[43]								32,000	
ca. 1570[44]	42,000	232,000	110,000	80,000					
1582[45]	80,000								
1585[46]					225,000				
1600[47]		240,000							
1603[48]	60,000								
1629[49]	115,000								

got a high average tonnage early, not by concentrating on large ships but by having many bulk carriers. Other European states saw the size and character of their merchant marines directed and even determined in a similar way to the English, but in the late seventeenth and eighteenth centuries such efforts disappeared. The need for big ships was gone. The single exception was in trade to the East Indies. There large ships still had a place, and it was no coincidence that it was the last trade from which English shipbuilding bounties disappeared.[50]

The average size of ships increased in part for economic reasons. The larger the ship, the higher the ratio of tons served for each crewman. That was always the case. There were other factors which created productivity gains, but that one was consistent throughout the period.[51] It was especially obvious in bulky trades such as those in tobacco, sugar, coal, and grain. In 1582, 35.4 percent of English ships were from 100 to 499 tons, but in 1788 it was 67.3 percent.[52] By the latter date, purpose-built naval vessels could and did handle defense of merchant ships. Traveling in convoy, they did not have to worry about acting as fighting ships. The government policy to direct shipbuilding and shipping toward defensible ships was no longer needed. Rather, by creating navies for convoy duty,

36. Estimate by R. W. Unger, based on contemporary surveys and customs accounts.

37. Jacques Heers, *Gênes au XVe Siècle Activité économique et problèmes sociaux* (Paris, 1961), 280. Ships of five hundred tons or more only.

38. Lane, *Navires et Constructeurs*, 95.

39. Vogel, "Zur Grosse der europäischen Handelsflotten," 268-333.

40. Estimate by R. W. Unger, based on contemporary surveys and customs accounts.

41. Ibid.

42. H. P. H. Jansen, "Handelsvaart van de Noordnederlanders," *Maritieme Geschiedenis der Nederlanden*, vol. 1 (Bussum, 1976), 272. A 1564 report only gives ships of three hundred tons and more and gives a total tonnage of 90,000. The 1567 report includes only ships of two hundred tons or more.

43. Frederic C. Lane, *Venice, A Maritime Republic* (Baltimore, 1973), 480, includes ships of 240 tons or more only.

44. Vogel, "Zur Grosse der europäischen Handelsflotten," 268-333.

45. Estimate by R. W. Unger, based on contemporary surveys and customs accounts.

46. Hamilton, "The Decline of Spain," 215. The figure is for both Spain and Portugal and is an approximation.

47. Philippe Dollinger, *The German Hansa*, ed. and trans. by D. S. Ault and S. H. Steinberg (London, 1970), 344-345, 355, 358.

48. Vogel, "Zur Grosse der europäischen Handelsflotten," 268-333.

49. Jack, *Trade and Industry*, 98.

50. See Dietz, "Royal Bounty and English Merchant Shipping," 5.

51. Douglass C. North, "Sources of Productivity Change in Ocean Shipping, 1600-1850," *Journal of Political Economy* 76 (1968): 959.

52. Ibid., 958.

Year	England	Dutch Republic	Germany	France	Spain & Portugal	Italy	Venice	Genoa	Denmark-Norway & Sweden
1636[53]		500,000							
ca.1670[54]	94,000	600,000	104,000	80,000					
1676[55]	500,000	900,000		100,000					
1686[56]	340,000								
1700[57]		500,000							
1702[58]	320,000								
1750[59]		500,000							
1761[60]	460,000								
1775[61]	700,000								
1786[62]	751,626								
1786-7[63]	881,963	397,709	155,349	729,340	234,303	311,964	60,332	42,130	555,299
1788[64]	1,055,299								
1788[65]	1,200,000								
1790[66]	1,290,000								
1800[67]	1,856,000								

After 1707, all "England" figures are for the United Kingdom.

governments opened possibilities for shipbuilders to make choices based on the goods to be carried rather than the fighting to be done. The shipbuilding industry was left free to seek out the optimum size for cargo ships, a size which fell in the range of around four hundred tons. The Dutch merchant marine seems to have arrived at that solution first, in part because there was no central government to direct shipping, in part because shippers had great influence over the government that emerged in the Dutch Republic, and in part because of a well-established Dutch tradition of convoying in the fishery which dated from the fourteenth century. The long-term results were a more efficient shipping industry, changes and adjustments in ship design, and, above all, long-term growth in shipping and, therefore, in the total shipping tonnage of Europe.

53. Unger, *Dutch Shipbuilding before 1800*, 11, includes estimate for all trades. See also Bruijn, "De vaart in Europa," 200. His estimate of 310,00 tons does not include extra-European trades, fisheries, whaling, or inland vessels.

54. Vogel, "Zur Grosse der europäischen Handelsflotten," 268-333.

55. Petty, *Political Arithmetick*, 5.

56. Davis, *Rise of the English Shipping Industry*, 395-406.

57. Estimate based on the number of ships, extrapolating for size of ships and adding an approximate tonnage for extra-European trades, fisheries, and whaling.

58. Davis, *Rise of the English Shipping Industry*, 395-406.

59. Estimate based on the number of ships, extrapolating for size of ships and extra-European trades, fisheries, and whaling. J. V. Th. Knoppers, "De vaart in Europa," *Maritieme Geschiedenis der Nederlanden*, vol. 3 (Bussum, 1977), 226-227, gives an estimate of 365,000 for ships trading only within Europe.

60. Vogel, "Zur Grosse der europäischen Handelsflotten," 268-333.

61. Ibid.

62. Davis, *Rise of the English Shipping Industry*, 395-406.

63. Romano, "Per una valutazione della flotta mercantile europea ala fine del secolo XVIII," 573-591.

64. Davis, *Rise of the English Shipping Industry*, 395-406.

65. Waters, "'The English Pilot' and English Shipping," 332-334.

66. Vogel, "Zur Grosse der europäischen Handelsflotten," 268-333.

67. Ibid.

Richard W. Unger is a professor in the Department of History at the University of British Columbia, where he has taught medieval history since 1969. He has written Dutch Shipbuilding Before 1800: Ships and Guilds *(1978),* The Ship in the Medieval Economy *(1980) and most recently,* The Art of Medieval Technology: Images of Noah the Shipbuilder *(1991). He is now working on a book on the history of the Dutch brewing industry from the Middle Ages to the nineteenth century.*

Query and Response

Dear Editor:

I would like to take the opportunity to expand and comment upon some of the items submitted as evidence by Evan Randolph in his article *"Fouled Anchors?* Foul Blow!" in *The American Neptune* 52, no. 2 (Spring 1992).

The 18 December 1851 letter of John Lenthall to Commodore Charles W. Skinner, entirely reprinted in *"Fouled Anchors?* Foul Blow!" was cited and identically interpreted by proponents of the 1797 origin of the *Constellation* as early as 1961. The full letter was reproduced in manuscript form by Howard Chapelle in *The Constellation Question* (with Leon Polland [Smithsonian Institution Press, 1970], 33-37). The authors of *Fouled Anchors: The* Constellation *Question Answered,* as well as several readers of "Foul Blow," agreed with Chapelle's view that the letter reflected a subordinate tendering several options to a superior. It was not a statement of intent by constructor Lenthall, who apparently would not decide the fate of the worn frigate until May 1853.

Regarding the January and February 1853 docking plans, which offer important evidence of the hull form of the frigate *Constellation* just prior to her demise, the author of "Foul Blow" postulated that both drawings were independently misdated because he was unable to envision how a pantographic device might be able to measure a hull underwater. Measurements were necessarily made before each dry dock event, and *Fouled Anchors* offered an archival drawing by Charles S. Bruff actually entitled "For taking the shape of ship before docking," found in the Grice Collection, Record Group 45, National Archives, and dated ca. 1817-65. While this exact machine may or may not have been employed on *Constellation,* the drawing confirms that the shapes of ships were taken before docking, and that the technology to accomplish it was available.

"Foul Blow" reproduced the Bruff drawing as Figure 2. It shows a two-dimensional representation of a complicated multiple lever-acting device. In preparing our original report, we reviewed the Bruff drawing with a number of mechanical and naval engineers who agreed that the drawing depicted a workable appliance which could clamp to the keel and probably seek and measure, regardless of bottom fouling, the distance between the bottom of the false keel and the lower edge of the rabbet. The changing distance reflected the true hog of the *Constellation*'s keel. Since the device clamped to the keel and relative measurements were transmitted by graduated rods, the sea state was largely irrelevant to the accuracy of the process.

The transverse section plan dated 11 January 1839, briefly mentioned in "Foul Blow" and attributed to the "Lloyd Olson Collection" (actually Loyd Olsson), was not employed in our study because it was one of the many items deemed likely forged. Allegedly from Record Group 45, the primary copy of this crude sketch was found in the Leon Polland Papers and it is likely Polland inherited that copy from the tainted historical files developed by others and maintained aboard the *Constellation* after she was brought to Baltimore. He specifically chose not to utilize it in his defense of the 1797 origin of the ship. In the late 1960s Polland probably gave a reproduction to Olsson, an excellent researcher employed by the Naval Historical Center.

Like so many other documents allegedly supporting the continuous existence of the *Constellation,* no original could be found in the archives cited for the 1839 transverse sketch, and it had certain characteristics common to the proven and likely forgeries. If nothing more, the report *Fouled Anchors: The* Constellation *Question Answered* should remind researchers working the subject to be very wary of spurious material. Documentation which has no verifiable provenance and works derived from that documentation should be set aside.

"Foul Blow" also reiterates the use of the 30 December 1840 hold plan of *Constellation* to show that a new bow was installed before that date. The hold plan is tipped-in to the Diary of Daily Transactions at the U.S. Navy Yard, Charlestown, 1 July 1840 - 28 December 1841. Hold plans were regularly pasted in navy yard logs in order to record the placement of weights and its effect on the trim of each vessel before she went to sea. The volume in which appears the 30 December 1840 plan has a number of hold plans for various ships. Each plan has copious notations or, as in the case of *Constellation,* a memorandum following which tabulates the positions and

number of tanks, casks, and kentledge in relation to the meticulously measured trim of the ship. Seen in context, it is readily apparent that the plans, actually diagrams, were executed by a variety of draftsmen and were meant to record the distribution of weights along the centerline of each vessel. The transverse distribution was not as critical, and the outboard perimeter of the hold was irrelevant to the purpose of the drawing.

Comparison with other hold plans in the same series of yard logs in Record Group 71 shows that the shape of the ship's hull was represented by an arbitrary line determined by the draftsman. In this series of logs there is no accurate differentiation of hold perimeter between ship types. Hold plans for sloops of war, frigates, and brigs frequently look alike, and none represents the true hull form of the ship represented. There is no reason to believe that the 30 December 1840 hold plan of *Constellation* depicts hull form any more accurately than others in the same volumes.

Even if the hold plan were an accurate depiction of hull form, it depicts the shape of the hull to the inside of the ceiling. However, the lines plans which the hold plan is claimed to match were drawn to the outside of the frame. The best possible match would be parallel lines, not superimposed lines as shown in the article. "Foul Blow" quoted our continuing view that a hold plan is inappropriate to use as an indicator of hull form.

The *Constellation* controversy has been around for decades. We hope that our report, *Fouled Anchors*, did more than reveal the widespread forgery of documentation supporting the 1797 origin of that worthy ship. It also offered a cogent alternative reinterpretation of the vessel based on significant tangible evidence that was frequently nonverbal in nature. We look forward to an active, non-emotional exchange and discussion in forthcoming issues of *The American Neptune*.

Dana Wegner
Curator of Ship Models
David Taylor Research Center
Bethesda, MD

Dear Editor:

In a recent article entitled *"Fouled Anchors?* Foul Blow!" by Evan Randolph, which appeared in *The American Neptune* 52, no. 2 (Spring 1992), the cart appears to have been set before the horse. Mr. Randolph has used poor historic insight in his article and attempts to indicate that the currently reconstructed *Constellation* now on display in Baltimore harbor represents the initial hull of this vessel as built at Baltimore in 1797, rather than a vessel that was constructed at Norfolk to entirely different plans designed and drawn by John Lenthall in 1853.

The log of the Gosport (Norfolk) Navy Yard indicates that "the keel of the frigate *Constellation* in ship house (B)" was laid by a work crew on 25 June 1853. Unfortunately, the word *frigate* was used instead of the words *sloop of war* to describe this new vessel being built, though in later log entries the vessel is correctly designated as a sloop of war. The crucial entry is that for 26 August 1854, which reads: "At 15 minutes to 12 N[oon] *new sloop of war Constellation* (emphasis added) was launched from Ship House (B) without any accident." It is apparent, therefore, that the individuals working on this vessel during 1853 realized it was of quite a different form than the old frigate *Constellation* which had been constructed and launched at Baltimore in 1797.

Several contemporary newspaper entries of the 1850s support this conclusion, including an article in *The Monthly Nautical Magazine* published in 1854 that is on file at the Mariners' Museum in Newport News, Virginia. The article provides the following headline and data:

Naval Improvement: The Old and the New Ship
Constellation

Constellation	Old	New
Length between perpendiculars	164'	176'
Beam moulded	40.06'	41'
Hold to gun-deck	19.06'	21'
Length on load-line	162'	176'

These figures indicate that there was quite a big difference in the final appearance of the two vessels. The length between perpendiculars had increased by twelve feet, but the length on the load-line (or water line) indicated that the new vessel was fourteen feet longer at that point, indicating a completely different profile. Also, the increase of 1.94 feet in her hold would have been impossible without major rebuilding.

An excellent paper on the original frigate *Constellation* entitled "USF *Constellation* as She May Have Appeared in the Period 1797 to 1800" by Thomas A. Todd appeared in the *Nautical Research Journal* 31, no. 2 (June 1985): 55-67. This article is well illustrated and contains plans of both the original Baltimore frigate and the Gosport-built sloop of war and indicates the absurdity of the retention of the original frigate's hull for that of the sloop of war.

As Dana Wegner indicated in his volume entitled *Fouled Anchors: The* Constellation *Question Answered*, the relic on display at Baltimore is indeed a valuable one as it represents the last vessel constructed for the sailing navy of the United States. Unfortunately, the current Baltimore display attempts to reconstruct this vessel into

a late eighteenth-century two-deck frigate instead of the single armed deck of a sloop of war of the mid-nineteenth century it should be. As a result, the relic provides a misguided representation of a vessel that never existed in her current form.

I also wish to respond to the information that Mr. Randolph presented in the most recent issue of *The American Neptune* (52, no. 3 [Summer 1992]: 201-202) to defend his identification of the lead vessel in an 1805 Antoine Roux painting as *Constellation*. First, the material found in Knox's *Naval Documents* . . . (cited by Mr. Randolph) represents two different approaches to nomenclature. That for *Constellation* is based on British models, while the one for *Congress* appears to represent terminology being used at the time in the early American sailing navy. The spar called a topgallant mast for the *Constellation* is headed by a "pole" which carries a "royal yard" and thus duplicates current British terminology. However, for *Congress* the topgallant mast is topped by a "royal mast," apparently terminology then being introduced into the American navy for these two items. If these tables are drawn out on a sail plan, each will have the same structure and general appearance, with the exception that the main mast assembly of the *Constellation* will measure taller than the same mast assembly for *Congress*. If we used Mr. Randolph's terminology, both exhibit four part assemblies; that is, each is composed of four parts: the main mast, its topsail mast, its topgallant mast, and its royal mast, though in the case of *Constellation* the latter is called a pole. Nautical terminology was still very fluid during this particular period in our naval history, and these two tables illustrate this point admirably.

Second, the Charles Ware drawing of *Congress* was made at least twelve years after the painting by Antoine Roux (1805). In *The American Neptune* 3, no. 3 (July 1943): 267-269, an article entitled "Charles Ware, Sail-maker" provides some information about Ware, who "appears first as a civilian sail-maker in the Boston Navy Yard on 9 January 1817 and disappears on 25 June 1831." The article also provides information about his various drawings which have survived and informs us that twenty-six of them are known (one of which is a sail plan of the frigate *Congress* possibly presenting her as she appeared around 1820) and can be found in ". . . a large book bearing the shelf title 'Drawings of U.S. Ships, Guns, Etc. Made by Charles Ware at the Boston Navy Yard.'" This material is currently located at the National Archives. None of the Ware drawings are dated, though each contains his signature. The earliest possible date for any of the drawings would be in 1817 and the last in 1831. I would assume that the *Congress* sail plan and profile probably represents this vessel as she appeared around 1820, about fifteen years after the painting by Antoine Roux had been made, and the profile appearance of *Congress* would have changed moderately each time she had gone in for repairs during these years. The exterior appearance of a vessel can change drastically within a fifteen-year period; therefore, the drawing provides poor evidence for what Mr. Randolph suggests. Thus, to claim that the Ware sail plan and hull profile would represent an exact duplicate of the Roux drawing is nonsense.

Third, I do not agree with Mr. Randolph's statement that Commodore John Rodgers assumed command of the *Constitution* as early as 14 November 1804, nor do any of our earlier American naval historians, including J. F. Cooper, E. S. Maclay, or E. B. Potter. Rodgers assumed command of *Congress* in 1804 and continued through the first portion of 1805 as commander of this vessel, when he succeeded Commodore Barron apparently shortly after the attack against Tripoli in 1805. The entry referred to found in Hammersley's *A Naval Encyclopedia* states: ". . . in 1804 he [Rodgers] commanded the 'Congress,' 38, in the squadron employed against Tripoli under Commodore Barron, whom, in 1805, he succeeded in the command." Stephen Decatur assumed command of *Congress* in November 1805, not 1804. If Captain Hugh Campbell was commander of *Constellation* (the last vessel in line) shown in the Roux painting of 1805, he, being junior to Rodgers in *Congress*, would not be entitled to fly a commodore's flag, additional evidence that the lead vessel is *Congress*, not *Constellation*.

Further evidence comes from the work by Captain Dudley W. Knox that Mr. Randolph calls Knox's *Naval Documents*. The title of the seventh volume of this series is *Register of Officer Personnel United States Navy and Marine Corps and Ships' Data 1801-1807* (Washington, D.C.: GPO, 1945). This source indicates that John Rodgers was in command of *Congress* on 22 May 1805, the date he assumed command of the Mediterranean squadron, a command he held through May 1806, when he returned to the United States. When Rodgers actually transferred his flag to *Constitution* is not definitely known, but it would take time to assemble *Congress* and *Constitution* at one place before this transfer of command and flag could take place; therefore, it was possibly several weeks after the tentative 22 May 1805 date given this Roux painting.

The key point, however, is the number of guns carried by the vessel in the painting. The first of three 36-gun frigates designed by the federal government to be launched was *Constellation*, which before the end of 1799 had been armed with thirty-eight guns. *Congress*, the next of these smaller Federal frigates to be launched, was armed with forty guns before the end of 1799. Apparently *Constellation* and *Congress* were similar in design, the only noticeable difference being two additional guns added to the armament of *Congress*. The third, *Chesapeake*, was

armed with forty-two guns by the end of 1799. All three of these smaller frigates carried this final number of guns at the time each was dropped from the rolls of the Navy. Thus *Constellation* had thirty-eight guns from about 1799 until she was broken up at Norfolk in 1853. *Congress* also carried forty guns from 1799 until she was broken up at Norfolk in 1838. *Chesapeake* carried forty-two guns at the time of her capture by the British during the War of 1812 and received additional guns while in British hands.

The Antoine Roux painting illustrates three vessels approaching the port of Marseilles on or about 22 May 1805. Two vessels are modified 36-gun frigates and one vessel is a 10-gun sloop. The lead vessel in this painting is armed with forty guns and therefore represents *Congress,* which flies a commodore's distinctive pennant which on this date would have been flown by Commodore John Rodgers. The 10-gun sloop is the purchased vessel *Hornet,* while the third vessel in line with the extra tall main mast is the 38-gun frigate *Constellation.*

Mr. Randolph's contention that the 40-gun frigate shown in this painting by Roux represents *Constellation* is a gross error. One cannot bend historical fact. The initial *Constellation* was never armed with forty guns but carried thirty-eight guns until she was broken up at Norfolk in 1853; therefore I must disagree with any historical consultants who assigned the name *Constellation* to the lead frigate mounting forty guns found in the Antoine Roux painting under discussion, including those involved in the preparation of The Seafarers Series volume entitled *The Frigates* (Henry E. Gruppe, ed., Alexandria, VA: Time-Life Books, 1979). The lead frigate shown in the Roux painting reproduced on page 25 of that volume carries forty guns, the number of cannon known to have been mounted on *Congress* during this particular period of history.

At no point in the discussion of this subject has Mr. Randolph denied this essential fact, nor would he be wise to do so. In addition, *Constellation* had an unusually tall main mast assembly found on the third and last vessel in line correctly illustrated in this painting by Roux. As *Congress* was the only 36-gun Federal frigate of this period ever outfitted with forty guns, the lead vessel represents this ship.

Thus I state once again that the Antoine Roux painting of three American naval vessels seen approaching Marseilles represents the following vessels from right to left: *Congress* of forty guns, followed by *Hornet* of ten guns, with *Constellation* of thirty-eight guns bringing up the rear. *Congress* was the only American frigate of this period to carry forty guns, while the last American frigate in the rear has an uncharacteristically high main mast assembly, which the 38-gun *Constellation* is known to have had.

Merritt A. Edson, Jr.
Bethesda, MD

Dear Editor:

While disputing the findings of Evan Randolph's article "Roux Painting Mystery Solved!," Mr. Merritt A. Edson, Jr. has again shot himself in the foot. Edson, a ship modeler who places considerable confidence in secondary sources, cites *A Naval Encyclopedia* (L. R. Hammersley and Company, 1884), 696 to prove that Commodore John Rodgers commanded *Congress* until 22 May 1805. If he had consulted the Rodgers Family Papers or the Preble Papers at the Library of Congress, or the Preble Diary at the New-York Historical Society for 14 November 1804, or Captain Dudley Knox's readily available *Naval Documents Related to the United States War with the Barbary Powers* 5: 131-134, he would have discovered that Rodgers turned *Congress* over to Stephen Decatur at Syracuse on 14 November 1804. Furthermore, from the time he sailed from Hampton Roads on 5 July 1804 until he surrendered the ship to Decatur, Rodgers never had the opportunity to fly a commodore's broad pendant. Equally, Decatur, who had but nine months' seniority in grade at the point of turnover, never flew a broad pendant before he sailed from Tangier, Morocco to the United States on 24 September 1805. *Congress,* therefore, from her arrival at Gibraltar on 12 August 1804 until her departure thirteen months later, never hoisted a blue broad pendant.

In a similar type of criticism, Mr. Edson recently disputed my Winter 1987 *Neptune* article "The South Carolina Frigate: A History of the U.S. Ship *John Adams*" by referring to a single secondary source, George Foster Emmons's *The History of the Navy of the United States, From the Commencement, 1775-1853,* despite the fact that a myriad of primary sources supported that article.

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Editor's Note: The article entitled "Roux Painting Mystery Solved!" by Evan Randolph appeared in *The American Neptune* 50, no. 1 (Winter 1990), and Merritt Edson's comments in reply appeared in the most recent issue, Summer 1992.

News

John Carter Brown Library 1993-94 Research Fellowships

The John Carter Brown Library will award approximately fifteen short- and long-term research fellowships for the year 1 June 1993 to 31 May 1994. Short-term fellowships are available for periods of two to four months, with a stipend of $1,000 per month. Long-term fellowships are for six months, with a stipend of approximately $2,500 per month. Research proposed by fellowship applicants must be suited to the holdings of the library. The application deadline is 15 January 1993. For more information, write to the Director, John Carter Brown Library, Box 1894, Providence, RI 02912.

Conference Focuses on Halifax Explosion

On 17 December 1917, the explosion of the ammunition ship *Mont Blanc* devastated Halifax harbor, with a loss of almost 2,000 lives. A seventy-fifth anniversary conference examining the social and economic repercussions of the disaster will be held at St. Mary's University on 3-6 December 1992. For further information, contact Alan Ruffman, Program Co-chair, The 1917 Explosion, Gorsebrook Research Institute, St. Mary's University, Halifax, Nova Scotia, B3H 3C3, Canada.

Maritime Museum of Monterey Expands

The new Maritime Museum of Monterey, at the Stanton Center, Custom House Plaza, Monterey, California, opened on 31 October 1992. Expanded on the original Allen Knight collection, the new museum presents seven major exhibit themes, from the Spanish voyages of discovery to twentieth-century fishing and canning. Also on exhibit is a 1,000-prism Fresnel lens from the Point Sur lighthouse.

National Maritime Museum Library's Collection Guides

The library of the National Maritime Museum, Greenwich, England, announces a new series of subject bibliographies designed to help researchers. The first publication, *Christopher Columbus*, lists all related books, pamphlets, and journal articles held at the museum library on the subject. The *Library and Manuscripts Collections Guide* is a brief guide to the library's holdings, including reference materials and manuscripts. Both are available from the Museum Library, National Maritime Museum, Greenwich, London SE10 9NF, England.

Call for Papers

The History Department of the United States Naval Academy will sponsor the 11th international Naval History Symposium from 21 to 23 October 1993. Proposals for papers and sessions in *all* fields and *all* areas of naval history, from ancient to modern, are welcomed. The deadline for proposals is 1 April 1993. Contact Robert W. Love, Jr., History Department, U.S. Naval Academy, Annapolis, MD 21402-5044.

Project HMS *Detroit*

Having named a Board of Directors and operating officers, Project HMS *Detroit* continues to raise funds and seek volunteers to assist in the construction of a replica of HMS *Detroit*, which was launched at Amherstburg, Ontario during the War of 1812 and served as Sir Robert Barclay's flagship at the Battle of Lake Erie on 10 September 1813. The aim of the project is to create an accurate understanding and a better appreciation of the significance of Amherstburg, the King's Navy Yard that was located there, and especially HMS *Detroit*. For more information, write to Project HMS *Detroit*, P. O. Box 1812, Amherstburg, Ontario, N9V 2Z2, Canada.

Book Reviews

JOHN B. HATTENDORF, ED., *The Influence of History on Mahan* (Newport, RI: Naval War College Press, 1991). Viii + 208 pages, illustrations.

The Naval War College conference marking the centenary of Alfred Thayer Mahan's *The Influence of Sea Power Upon History, 1660-1783*, as the frontispiece of the published proceedings shows, brought together a constellation of scholars in the field, including Philip A. Crowl, Gerald Wheeler, Dean Allard, William J. Morgan, Jon T. Sumida, William Braisted, William S. Dudley, David Trask, James A. Field, Roger Dingman, Norman Friedman, Kenneth Hagan, William Still, Holger Herwig, Raymond G. O'Connor, Barry Gough, Robert Seager II, and Clark G. Reynolds.

All of those in attendance, as George Baer so deftly put it, have in varying degrees come "under the *Influence*" of Mahan and his work. As Robert Seager cogently asks: "Who, then, was this unusual, personally unpopular, ill-starred shiphandler who was prone to seasickness? He was the man who, between 1890 and 1914, did as much or more than any other American to introduce his countrymen to new ways of looking at the U.S. Navy's role in American foreign policy decision making, the nation's proper role in world affairs, and the strategic implications and dimensions of national security." Aye aye, say I.

The proceedings are divided into four sections: "Then and Now," "The Influence," "The Man and the Historian," and "On Reflection." Every reader will have his or her own favorites. The following are some of mine.

In the third group are Lyle Evans Mahan's recollections of his parents, written in 1935 and 1936. They tend to reinforce the image of Mahan in Bob Seager's biography as a Victorian *paterfamilias*, stern and unbending, clothed in rectitude. Bill Dudley's piece in this same section, "Mahan on the War of 1812," takes the reader through the work of Mahan, Theodore Roosevelt, and James Fenimore Cooper — all nineteenth-century historians who studied that conflict in depth, and all of whose writings still require revisiting.

Barry Gough's piece, "The Influence of History on Mahan" lent itself as the title for the published conference proceedings and, as John Hattendorf realized, is valid in today's sense, perhaps more as "judgment" than "influence." Gough focused upon the works Mahan himself relied upon; more importantly, he reminds us of the necessity to evaluate Mahan in the context of the times in which he was writing. Gough argues that Mahan overemphasized the importance of fleet concentration, of the merchant marine, and of colonies, but was correct in his emphasis upon the importance of command of the sea.

Roger Dingman, in "Japan and Mahan," asks to what extent Mahan had an influence on Japan and its navy. Whether as a publicist for building a large navy, as a naval thinker, or as the "god of sea power," Mahan may have been useful to the Japanese but was not an instructor to them. As leaders of a modernizing island nation, they had no need of Mahan to remind them of the utility and necessity of naval power. Holger Herwig, in contrast to Dingman, sees Mahan as having a significant influence on both the Second and Third Reich. Yet the influence, great as it may have been, represented a "persistant misreading (or ignoring) of Mahan." Germany lacked ready access to the world's oceans and failed to heed Mahan's warning that no nation could be a great land power and a great sea power concurrently.

John H. Maurer ("Mahan, World Politics, and Naval Rivalries, 1904-1914") observes that Mahan as a student of international relations belongs to the school of *realpolitik*. Mahan saw (as did Theodore Roosevelt) that shifts in the global balance of power had implications — not all of them pleasant — for the United States. The gradual decline of Great Britain meant the end of a century of "free security" for this country. George H. Quester explores the issue of where Mahan can be credited with influencing the U.S. Navy since 1914, and where he cannot. A reliance on counterforce operations *(guerre d'escadre)* rather than countervalue operations *(guerre de course)* bears the Mahanian imprint. The "Maritime Strategy" of the post-World War II era also owes much to Mahan.

This edition of conference proceedings would have been strengthened had it included a transcript of the discussions following the presentation of papers and brief biographical sketches of the contributors. Those wanting to read about Mahan in more summary fashion should

proceed to the essays of Philip A. Crowl ("Alfred Thayer Mahan: The Naval Historian") and Robert Seager II ("Alfred Thayer Mahan: Christian Expansionist, Navalist, and Historian") published, respectively, in Peter Paret, ed., *Makers of Modern Strategy* and James Bradford, ed., *Admirals of the New Steel Navy.* Bob Seager's biography and the three-volume Seager and Doris McGuire *Letters and Papers* remain the final word.

The question has been asked: "Is Mahan still valid?" Very much so, to judge by the scholarly production of the last two decades. Why, man, he doth bestride this narrow (naval) world like a colossus.

RICHARD W. TURK

Allegheny College

ERIC C. RUST, *Naval Officers Under Hitler: The Story of Crew 34* (New York, Westport, CT, and London: Praeger, 1991). 6" x 9½", cloth, xii + 229 pages, 14 illustrations, tables, notes, bibliography, index. $42.95.

Germany's long and often agonizing process of "coming to grips with the Nazi past" (what is known technically as *Vergangenheitsbewältigung)* has not yet run its course. It is likely to continue long after the wartime generation has passed on. This process of cultural self-examination ranges from autobiography to novel, from history to pulp-trade hits. Understandably, it often focuses on the military experience of war, for it is in the profession of arms that questions of honor, duty, valor, and commitment are most sharply defined. Much is at stake when examining the experience and legacy of those twelve years between 1933 and 1945 which many Germans hoped would launch the "Thousand-year Reich." The problem of personal accountability in a totalitarian state remains a recurrent focus.

How Germany's navy fared during that period has been central to a great many studies both in Germany and abroad. Operational histories and accounts constitute the majority of postwar works on the navy, but even these frequently find themselves drawn into the vortex of political speculation. Yet in the absence of hard data, many writers often unwittingly disseminate untested assumptions or else skirt some of the critical issues. Thus it is that the traditional iconography of "German sailors under the Swastika" prevails. Recent North American productions are a case in point: Charles Koburger's *Steel Ships and Iron Crosses* (New York: Praeger, 1989) asserts, among other things, that the navy had "no positive tradition" until its attempt to rescue refugees across the Baltic in 1945; Jordan Vause's *U-Boat Ace: The Story of Wolfgang Lüth* (Annapolis: Naval Institute Press, 1990) tries to startle us with the news that the famous captain of his title was "really" a Nazi; Michael Gannon's epic docu-drama *Operation Drumbeat: The Dramatic True Story of Germany's First U-Boat Attacks along the American Coast in World War II* (New York: Harper and Row, 1990) regales the reader with the adventures and derring-do of his historical "hero." Significantly, Gannon's book was aired on public television in December 1990 in the National Geographic production "U-Boats: Terror on Our Shores."

Two important studies have now met the thorny issue of the German navy and National Socialism head on, and they have done so on the basis of solid documentary evidence and sound historical principles. One of them, Charles E. Thomas's *The German Navy in the Nazi Era* (Annapolis: Naval Institute Press, 1990) has provided the substantive context and background for the issue, while Eric C. Rust's *Naval Officers Under Hitler* (1991) has now given us a detailed case study of the commissioning class of 1934. Significantly, not since Holger H. Herwig's epochal *The German Naval Officer Corps: A Social and Political History 1890-1918* (Oxford University Press, 1973) had anyone undertaken a study of this kind. Rust's book, the only study of any officer class after 1918, therefore stands as a benchmark in the genre. Indeed, it is the only one to have tracked a class from its school days, throughout the war, and up to its senior citizen years today. This was necessary, Rust correctly explains, for despite all that military historians have accomplished, "we know little about the human qualities, psychological make-up, self-image, and personal experience of the thousands of officers who have served Germany at sea in our century" (p. 2).

Rust's fine book first appeared as a doctoral dissertation entitled "German Naval Officers Under and After Hitler" (University of Texas at Austin, 1987). So perceptive was his study, and so balanced in conception and execution, that it needed little emendation. Rust had set himself the task of examining as a collective biography the lives of the 318 officer candidates who had joined the Imperial German Navy *(Reichsmarine)* in 1934. The choice of year was both scientifically astute and personally cautious. The crews of 1935 and 1936 had consisted of huge groups of some five to six hundred members. That of 1934, on the other hand, recommended itself for pragmatic reasons: its members would have had less ideological exposure to Hitlerism in their high school years and would have shown greater continuity from the Weimar Republic, and it was numerically about half the size. The choice proved both salutary and statistically reliable.

Rust's method is syncretistic. He draws as much upon historiographical and sociological methodology as he does from the humanistic tradition of scholarship. This accounts for the deep texture of his work. He made all initial contacts with Crew 34, formulated and distributed his thoughtful and revealing questionnaire, and interviewed the veterans. It is a credit to his professionalism and humaneness that he so readily won the confidence of his subjects. It is very rare indeed that scholars gain entry to the *Kameradschaften* of the former German navy. The fact that Rust himself had served in the navy of the Federal Republic of Germany may well have authenticated his purpose. His postwar service would at least have marked him as one of the "Band of Brothers," a Nelsonian term that spans not only the generations, but national boundaries. Rust clearly understands the risks of being a sailor-scholar: one may be privy to insights as a "Brother" which one withholds or only infers as a historian.

In a well-knit sequence of thoughtful chapters, Rust traces his subjects from their early apprenticeship to the navy through their often sterling wartime careers. He examines their human responses to the grim realities of war, ponders their readjustment during the often desperate years of Germany's reconstruction, and analyzes their current reflections on Germany's past and present. What makes the study particularly valuable is the author's care in setting his data in the correct historical and personal context. Though some readers may wish to challenge the occasional judgment, they will recognize Rust as astute, comprehensive, and eminently fair. For a number of reasons, sequels to this type of study are unlikely to follow. Rust's work is therefore an especially important navigational fix on the chart of naval history.

MICHAEL L. HADLEY

University of Victoria

ROBERT S. WEDDLE, *The French Thorn. Rival Explorers in the Spanish Sea, 1682-1762* (College Station, TX: Texas A&M University Press, 1991). $49.50.

In the first half of the four hundred-year history of the Spanish empire in the Western Hemisphere, the Gulf of Mexico was a "Spanish Sea." Only from the late seventeenth century did Spain's European rivals mount serious efforts to establish a presence there. *The French Thorn* chronicles various expeditions launched by the kings of France to found settlements on the Gulf Coast and other expeditions launched by the kings of Spain to thwart them. Spain faced a difficult set of choices with regard to the northern shores of the "seno mexicano," as they called the Gulf of Mexico. With a vast colonial empire to govern from Mexico south to the tip of Tierro del Fuego, successive governments had to decide whether resources could be spared to defend Spanish claims to the northern borderlands, far from the centers of population and wealth. Their decisions changed over time, depending upon the broader financial and political situation in Europe and their overseas possessions as a whole. More often than not, however, they neglected the Gulf Coast, concentrating their efforts on settlements in Florida, Mexico, the Caribbean, and Central and South America.

Because of that neglect, Weddle argues, Spain failed to realize the crucial importance of the Mississippi River as the southern entry into the North American continent. Given the focus of the book, which is the second volume (after *Spanish Sea. The Gulf of Mexico in North American Discovery, 1500-1685)* of a projected trilogy, the author's priorities are hardly surprising. It is worth remembering, however, that those priorities were not necessarily shared by Spain, for the obvious reason that its perspective differed. What looked like an attractive venue for French colonial ambitions then, and like the very heartland of the United States now, looked like remote, inhospitable northern borderlands to the Spanish empire. The dilemma faced by successive Spanish governments was that, although they did not particularly want to settle those borderlands, they did not want any rival power to do so either. At stake were not only colonial tax revenues, which Weddle tends to emphasize, but control over key positions that secured the safety and communication links of the empire as a whole. Given that, the Spanish had to respond to any concerted effort to claim the Gulf Coast. When that effort came in the late seventeenth century, the Spanish government reacted by ordering reconnaissance missions aimed at rooting out the French, as well as mapping the many parts of the coast that were still largely unknown to Europeans.

The narrative proceeds chronologically, beginning with the attempt of René Robert Cavelier, Sieur de LaSalle, to navigate the Mississippi southward to its mouth in the mid-1680s. Weddle knows LaSalle well and deals effectively with both the man and his accomplishments. Hampered by inaccurate maps and faulty instruments, as well as by his own manic-depressive personality, LaSalle nonetheless spurred the Spanish to renewed exploration of the Gulf Coast in the short term, and opened the Mississippi Valley to European settlement in the long term. He deserves his place in history.

Weddle focuses on the Spanish reaction to French incursions in the second part of the book, emphasizing the on-again, off-again nature of Spain's commitment to the Gulf. He makes little effort, however, to understand the full political and economic context in which the Spanish

decisions were made, falling back on hackneyed anthropomorphic notions that Spain lost vigor while its rivals France and England displayed the energy needed for successful exploration. In the last several decades, scholars have clarified the economic situation in Spain considerably, demonstrating an upturn in the economy from about 1680 on. Despite the chaotic political situation during the reign of the last decrepit Habsburg king, the economic revival laid the groundwork for Spain's eighteenth-century colonial resurgence.

The ascension of a French Bourbon to the throne of Spain in 1700 both complicated and eased Hispano-French rivalry on the Gulf Coast. During periods of friendly relations between the two powers, sealed by several Bourbon "family pacts" in the eighteenth century, relations could be almost cordial between French and Spanish colonies on the northern Gulf Coast. Separately or together, both the Spanish and the French shared the goal of keeping the English out of the region. Nonetheless, France continued to push for an expanded presence in the Mississippi delta, inevitably leading to conflict with Spain. The third part of the narrative follows several French expeditions, including that of Pierre le Moyne, Sieur d'Iberville, a worthy successor to LaSalle.

In responding to French expansionism, the Spanish founded several new settlements near the northern Gulf Coast in the early eighteenth century, but they generally avoided the coast itself, whose hostile inhabitants had thwarted European incursions since the sixteenth century. Part Four of the narrative focuses on the generally unsuccessful attempts to map this "Costa Brava" and bring it under a degree of imperial control, the better to thwart the French. With the Alliance of Spain and France in the Seven Years' War, the two rivals pulled together temporarily against England. The net result was that Spain lost Florida to England and gained Louisiana from France. This pitted Spain directly against England in the eastern Gulf and essentially eliminated France from contention. Weddle will chronicle the late eighteenth-century rivalry for the Gulf in the third volume of his trilogy.

The fifth and final part of this book focuses on the wealth of detailed maps that resulted from over a century of rival exploratory expeditions along the Gulf Coast and its hinterland. Most of the famous maps were French, but a good part of the information came from Spanish sources, information that Spain tried with varying success to deny to its rivals. Many of the maps discussed are reproduced throughout the book, adding much to its visual appeal. An extensive index and bibliography allow easy access to the densely detailed text, but the perfunctory glossary adds little of worth.

Weddle uses a wealth of documentary evidence, in manuscript and printed versions, throughout the book. By staying very close to his documentary base, he is able to recreate the physical and mental realities of the early modern world in considerable detail. French, Spanish, English, and Indian protagonists from many different tribes are sketched as fully as the documents allow. Indians serve as guides, informants, enemies, or intermediaries for the rival European powers, defining and redefining their roles as their own political situation dictated. Weddle is not afraid to assign praise and blame to the individuals whose exploits he chronicles, and he does not minimize the failings of even the greatest among them. They were often lost, frequently wrong, often grossly insensitive to the native peoples they encountered, and not immune to errors in judgment, even when they should have known better. In short, they were human beings, whose accomplishments can best be understood in their full human context. For the most part, that context is fully and evenhandedly described in Weddle's fine narrative.

CARLA RAHN PHILLIPS

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RICHARD ELLIS, *Men and Whales* (New York: Alfred A. Knopf, 1991). Cloth, 542 pages, 289 illustrations, 11 maps, glossary, bibliography, index. $40.00.

This massive, attractive volume attempts to provide a comprehensive account of the impact men and whales have had on each other from prehistoric times to the present. That is a daunting task, but Richard Ellis is uniquely qualified to undertake it, having deservedly achieved prominence as a painter of cetaceans, a naturalist with firsthand knowledge of whales' and whalemen's habitats, and a conservationist active in the affairs of the International Whaling Commission. Ellis has completed almost twenty years of work in these fields without apparent damage to his sense of wonder about whales or his sense of humor about human foibles, no small accomplishment. All of these qualities are shown to advantage in *Men and Whales*.

The book is a buffet of seventy well-illustrated chapters grouped within thirteen sections. Because almost all man-whale relations to date have been described at one end or the other of a harpoon, most chapters describe various aspects of regional whaling, but there are interesting diversions into such ancillary topics as mythological creatures, feminine fashion, whales as tourist attractions, and, inevitably, Melville and *Moby-Dick*. The pertinence and importance of the digressions are amply illustrated.

Ellis's memorable descriptions of the great whale are enhanced by his interesting portraits thereof. Here the

author's vigorous, unpretentious style and devotion to his subject are at their best. By way of illustration, in Ellis's words, "the sperm whale is not a typical whale; it is not a typical anything. It is one of the most unusual creatures in the world, more easily characterized by its differences from other whales — and from all other animals — than by its similarities. . . . The only thing on earth that resembles a sperm whale is another sperm whale." Ellis maintains that sort of directness through the maze of his multiple topics.

Detailing the systematic, century-by-century, species-by-species assault by men on whales, Ellis hits his stride when covering the twentieth century, in which runaway technology and heedless slaughter pushed many species to the threshold of extinction and, in the bargain, rendered large-scale whaling commercially unfeasible. In the years since World War II, the International Whaling Commission's bureaucrats, functionaries, and scientists talked endlessly of sustainable yields, species quotas, catch per unit of effort, and biometrical modelling. But organizational loopholes, pseudoscientific censuses, and ingeniously self-serving rationales allowed whaling nations to continue with the slaughter in the name of their short-term interest. Ellis, a personal witness to the IWC's numbers game and its appalling results, provides a readable, commendably clear account of this labyrinthine subject. Though appalled by the outcome, he moderates his emotions, letting the awesome kill figures make the point.

Men and Whales will reward scholars and lay readers seeking a one-volume, up-to-date compendium, but the book's undeniable shortcomings are certain to blunt its impact. In the first place, there are a surprising number of factual errors and outright misinformation in matters of detail, most of which should have been detected through informed editing. For example, the whaleboat duties of nineteenth-century boatsteerers (harpooners) and boatheaders (officers) are incorrectly described (pp. 185-186). Melville could not have known of the whaler *Kathleen*'s destruction by a sperm whale, as Ellis claims, inasmuch as the *Kathleen* went down in 1902, almost two years after Melville's death (and more than half a century after *Moby-Dick*'s debut). Survivors of the *Essex* disaster landed on Henderson, not "Dulcie" [Ducie] Island (p. 190). The vessel identified as the whaler *Lagoda* in a photograph of the New Bedford wharves is a merchant bark (p. 159). The illustration of whaleships wintering in the Arctic (p. 217) is in fact a lithograph of the British exploration vessels *Hecla* and *Griper*. There are other, similar errors.

Another serious drawback is the book's structure, in which components are inconsistently pigeonholed into geographical, technical, chronological, and species-based chapters. Ellis controls his immense subject matter by dropping one topic for another after a few pages, eventually picking up the dangling threads in a later chapter. As a consequence, a reader interested in, say, whaling's impact on the development of New Zealand must look in three different spots to get the entire picture. Meanwhile, interesting tidbits lurk in unlikely places. For example, discussions of the Wilmington Whaling Company and the Wilkes Expedition turn up in the "Nantucket and New Bedford" chapter. Furthermore, the dozens of sectional stops and starts generate a tremendous amount of unnecessary review and repetition. Having read about the oil hydrogenation process (p. 345), only a reader with a critically short attention span will require a re-explanation of that process twelve pages hence in the following chapter. Likewise, having learned of the Nazi raider *Pinguin*'s 1941 capture of a Norwegian Antarctic fleet carrying 23,626 tons of whale oil (p. 367), even that reader will probably remember the incident when it is reintroduced one page later and in the next chapter, tonnage figure and all. Such frequent, gratuitous repetitions give the impression that the book's components were written as independent modules without concern for overall continuity — or concision. Here again, attentive editing would have worked wonders. Ellis provides a lengthy bibliography but no source citations aside from a few in-text references, an omission that will discourage seasoned scholars and novices alike.

Although *Men and Whales* is less than the sum of its parts, its shortcomings do not compromise the author's well-reasoned observations and conclusions. The book is the best single volume now available on the general history of whaling, which makes it mandatory reading for whaling scholars and cetologists (no exceptions) and recommended for all others interested in maritime history.

KENNETH R. MARTIN

Woolwich, Maine

COMMANDER TONY GERMAN, *The Sea Is At Our Gates: The History of the Canadian Navy* (Toronto: McClelland and Stewart, 1990). 9¾" x 6¾", cloth, 360 pages, photographs, 3 appendices, index. Cdn $39.95.

This work deals with a seagoing institution and the people who took part in its creation. As the prologue tells us: ". . . the navy is adventure and ships are wondrous things; the sea opens a world to be grasped beyond our gates and those who follow it have a certain lightness in their hearts, steadiness of spirit, and sparkle in their eye." But, as the author informs us in the dedication, most Canadians are unaware of the sea.

As with much of Canadian history, the story of the navy is one of disengagement from European origins and an attempt to establish a North American identity. In 1912, the Canadian navy began its existence as a means of supporting the Royal Navy in the arms race leading to the First World War. In that conflict, the Canadian navy developed into an antisubmarine operation in response to one of the key developments in modern naval warfare. In the period between the wars, an attempt was made to lay the foundation for a truly national force in the Volunteer Reserves. World War II and the Battle of the Atlantic led to the expansion and consolidation of a Canadian navy which could act as a convoy escort force. Basically, Canadian naval leadership was responding to the realities of the North American triangle.

As the triangle disappeared, to be replaced by NATO, the role of the Canadian Navy was to carry out functions supportive of the major naval forces in the North Atlantic. As Commander German points out, this meant that the Canadian fleet could not be developed as a "complete" navy. It had to be integrated into a unified naval operation dominated ultimately by the United States. Obviously, this process has been intimately linked to economic development or the lack of it. From the late nineteenth century, industrialization created a series of "military industrial complexes" which provided state-of-the-art technology for the prosecution of warfare. Canada's place in this system has been only briefly that of a major player. The author brings out the very important point that the necessary integration of operations and command structure prevented the growth of Canada's own military industrial complex. For Canadians, this was merely an extension of a well-known phenomenon. The branch plant and its imported technology are quite familiar in the country's history.

Canada, as a nation, emerged from the chrysalis of the British Empire. From Dominion in the 1920s and 1930s to Middle Power during the 1940s and 1950s, and with the constitutional groundwork of 1980, finally a free-standing modern state, a member of the Group of Seven: such has been Canada's political path. The Canadian navy has undergone a parallel development. The thrusting off of British tutelage and British ways in naval as in political affairs has made Canadians more North American and faced them with the problems of sovereignty and its defense.

The rearranging of such ties has generally faced us with the need to evolve a Canadian outlook — an identity. This process, of course, raises the vexed question of relationships with the United States, the dominant society on this continent, our neighbor, and our most important trading partner. As a nation-state, Canada has emerged during a period when the European powers began their decline. The inexorable logic of the military industrial complex has led us to the situation which has been the *bête noire* of diplomatic and military planners for centuries. Instead of a balance of power, there is the hegemony of a single power. In this situation, Canadians and others have excruciating decisions to make. This book by a veteran Canadian naval officer has raised essential questions yet again. But by raising them in the context of Canada's record of achievements at sea, Commander German points to a niche which Canadians, as enterprising people, can fill. Having produced a valuable naval force under pressure once, Canadians will be able to do it again.

GERALD E. PANTING

Memorial University of Newfoundland

ALAN D. WATSON, *Wilmington, Port of North Carolina.* Studies in Maritime History Series, ed. William N. Still (Columbia, SC: University of South Carolina Press, 1992). Xi + 223 pages, illustrations, charts, bibliography, index. $29.95.

Surveying the history of a secondary port from colonial times to the present with balance and detail cannot be easy, but Alan D. Watson of the University of North Carolina at Wilmington has done just that. The secret of his success is that, besides doing extensive research on the history of the North Carolina port city, he has tried not to make too much or too little of his subject.

Watson has basically presented an economic history of Wilmington and eastern North Carolina, illustrating how the port's development was the key to the area's subsistence. Thus, while not neglecting the strictly maritime aspects of the story — Wilmington's location on the Cape Fear River, its advantages and disadvantages as a commercial entrepot, the ships and other craft that used its facilities and how these induced changes over the years, its competition with the ports of Norfolk and Charleston, etc. — he has wisely placed these nautical factors within the larger picture of the total development of the port and region.

Watson emphasizes, for example, the importance of the hinterland and its products in need of an outside market; the building of the railroads, and later highways, that did not always accrue to Wilmington's advantage; the gradual shift of agricultural exports from tar and pitch to cotton and other products; the competition with Virginia and South Carolina cities to serve North Carolina's Piedmont markets; and the impact of state and federal legislation on Tar Heel port cities in the nineteenth and twentieth centuries.

Not overlooked in Watson's survey of the port are major national events that affected its history. These include its place in the Revolutionary War, the role it played in the Civil War as an important blockade-running and privateering port, the fall of Fort Fisher and nearby Wilmington in early 1865, the move toward industrialization in the Upper South in the late nineteenth century, and Wilmington's prodigious shipbuilding efforts during World War II as a branch of Newport News Shipbuilding.

The only negative feature of the book is the absence of a map of eastern North Carolina with its rivers, cities, railroads, etc. clearly marked for the sake of those who, not being natives of the state (and who, therefore, do not comprehend the alleged metaphysical connection between "Carolina blue" and the color of God's sky!) cannot easily follow a number of Watson's major points regarding the economic growth of Wilmington and North Carolina.

This book belongs in every academic library, especially those with maritime or economic history collections. It is sound scholarship, well-presented, and is a worthy addition to the Studies in Maritime History Series.

JAMES M. MORRIS

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A. A. HOEHLING, *The Fighting Liberty Ships: A Memoir* (Kent, OH: Kent State University Press, 1990). 9¼" x 6½", cloth, 166 pages, 10 black and white illustrations, 2 maps, bibliography, index. $22.00

A. A. Hoehling's subtitle, *A Memoir*, fits his content better than *The Fighting Liberty Ships*, which leads the reader to expect a history of those valiant World War II cargo carriers. Hoehling's book is a personal reminiscence of his service as a young officer in charge of the U.S. Navy armed guard on board three merchantmen, the Liberty ship *John Lesher*, the non-Liberty T2 tanker *Tampico*, and the Liberty *James Harrod*.

Hoehling, who was on active duty as a navy public relations officer on Sunday, 7 December 1941, navigates through a blissfully short introductory narrative of his subsequent career beginning at Corpus Christi, Texas (more public relations); Boston, Massachusetts (local defense school); Newport, Rhode Island (harbor defense duty on board an ancient yacht); and Lakehurst, New Jersey (blimp training), before his first Liberty ship tour, which began on 22 December 1943. Unlike most memoirs by relatively unknown figures, Hoehling's has a story and a climax, although his introductory passage is slow going, exacerbated by the author's dedication to passive voice, by his burying his subject deep into tortured syntax, and by his use of an obscure chronological progression, a fault that continues throughout.

Hoehling, a professional journalist and author, picks up his pace when he begins his Liberty ship narrative. In late 1943, he reported on board *John Lesher* in time to sail from New York to Norfolk, where the ship spent Christmas Eve anchored in Hampton Roads before being assigned to UGS-18, a 9-knot convoy slowed by the speed of three ex-World War I Empire ships. Hoehling misidentifies these as a class. There was nothing uniform about this motley collection of confiscated vessels reflagged by the British in World War I.

After an uneventful crossing, the convoy broke up at Gibraltar, and *Lesher* went up the Mediterranean to the Suez Canal. After transiting it, she traveled unescorted through the furnace-like heat of the Arabian Sea to Colombo, Ceylon, before proceeding across the Indian Ocean and traveling up the Hooghly River, soiled with human and cattle carcasses, to Calcutta, where stevedores unloaded her cargo of P-38 fighters, trucks, and rice.

Lesher received unwelcome orders to return alone across the enemy submarine-infested Indian Ocean to the neutral Portuguese colony, Mozambique. The Axis underwater raiders accounted for the sinking of 385 ships in that body of water, "aggregating as much as 1.5 million tons" (p. 60). Accompanied only by gliding frigate birds, *Lesher* made a speedy and safe eleven-day passage. At Laurenço Marques, where Britons and Germans sipped afternoon tea in tense proximity, she took on a filthy, beetle-riddled cargo of coal for Naples, where she arrived on 30 April 1944.

The ship traveled empty to Algiers, where she received sand-ballast for her return crossing of the Atlantic. Hoehling, after surgery for a rupture caused by yanking misfired cartridges from 20-millimeter cannon, reported to Chester, Pennsylvania where he boarded *Tampico*, a fast (15-knot) tanker. The ship went to Galveston to pick up a volatile load of 140-octane avgas. While proceeding from there to New York for convoy, Hoehling and his fellow crewmen survived a several-day encounter with "The 'Great Atlantic Storm,' as the hurricane would be known, [which] caused $22.5 million damage to the Chesapeake Bay and snatched sixty-three lives. It left at least 390 dead in New England" (p. 96). In the aftermath of the storm, *Tampico* sailed in a small, fast convoy of C-2 and C-3 cargo ships and sister T2 tankers, headed for Liverpool on 17 September 1944. The trip was unexceptional. She lay at Merseyside for several days before returning empty to Bayonne, New Jersey in a storm-battered crossing with eleven other ships. There was no respite for her crew. Forty-eight hours after her mid-October arrival, *Tampico* returned to sea: "In a matter of

days, this late October, the North Atlantic had become wintry. With foul-weather gear, furred helmets and face masks, men could stand watch less than half an hour without being relieved" (p. 107). Encountering no German submarines or long-range bombers, Hoehling's tanker delivered another load of hi-octane avgas to Liverpool. When *Tampico* returned to the U.S., she received orders to refit, and the Navy reassigned Hoehling to the Liberty ship *James Harrod* at Philadelphia.

After loading 9,200 tons of 80-octane gasoline in five-gallon churns, *Harrod* set sail through the Chesapeake and Delaware Canal to join a thirty-five ship convoy escorted by Canadian corvettes. During the crossing, one of the Canadians sank a U-boat but rescued its crew. After calling at Southampton, *Harrod* sailed for Antwerp via the Dover Downs on 15 January 1945. She traveled with a seven-ship coastal convoy accompanied by one or two escorts during an evening when "the weather was alternately clear, misty and rainy" (p. 124). Before midnight, "the night became dry, calm, and inky black" (p. 124). At 1 A.M., *Harrod* rounded the white cliffs of Dover and steered for the anchorage off Ramsgate, Kent. Twenty-five minutes later she collided with an unlighted vessel riding at anchor. The crash turned *Harrod* into an inferno. She burst into a wild, gasoline-fueled firebomb. Five-gallon churns shot into the air and exploded in an awesome pyrotechnic display. The ship lost two lifeboats as a result of the collision. In the melee, all of the merchant marine crew escaped, but four of the armed guard died. Hoehling survived to tell his tale and to regret the lack of recognition his service received: "Considering its contributions to victory in the war at sea," he summarizes poignantly, "it remains a matter of mystery and sadness that the U.S. Navy Armed Guard receives such scant attentions in histories of World War II."

In a questionable conclusion, Hoehling attributes the turn in the Battle of the Atlantic, when the Allies finally overcame the German U-boat menace, to "a triumph for the convoy system and the hunter-killer groups formed around small carriers" (p. 77). Neither stratagem had proved very successful, however, until the advent of radar, a phenomenon unnoticed by the author.

Hoehling aptly provides a continuous window to World War II events that are concurrent with his narrative, and adopts a Baedeker-like approach to his wartime travels, which he successfully carries off. With a few exceptions, this is a good read, and while certainly not essential to the history of the Liberty Ships, does provide valuable peripheral material from a personal experience point of view.

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STUART M. FRANK, *Dictionary of Scrimshaw Artists* (Mystic, CT: Mystic Seaport Museum, 1991). 6½" x 10", cloth, xxxvi + 200 pages, illustrations, appendices, glossary, indexes. $55.00.

Dictionary of Scrimshaw Artists is the latest contribution to the phenomenon of interest in scrimshaw, termed by the author "the indigenous occupational handicraft of the whale-hunters." Since its rediscovery by collectors and students of American maritime history in the mid-twentieth century, scrimshaw has passed through several stages of identity. Beginning in the 1930s and 1940s as little more than the quaint relic of an overly romanticized industry, scrimshaw became the eye of a collecting storm in the 1960s and 1970s. Sadly, the reality that these marvelous examples of artistry and craftsmanship represented seemed drowned out, first, by a honeyed retelling of the whaleman's story, and, in later decades, by the rapid-fire banging of auctioneers' hammers.

A more systematic, comparative approach to scrimshaw has developed over the past decade or so. Attention has focused upon the iconography employed in so many examples and, partly as a result of the problem of fakes and forgeries, the techniques and styles of work. As a result, greater efforts have been made to determine the identities of scrimshanders or, as the author terms them, "scrimshaw artists."

Scrimshaw has often been characterized as an "anonymous art," and the thousands of unsigned examples in public and private collections certainly bear this out. Yet the nearly five hundred entries in this work go a long way to restoring the human element to the study of this artistic expression.

Listed among the biographical entries are the "household names" of the scrimshaw world; men such as Frederick Myrick, Edward Burdett, W. L. Roderick, and Frederick H. Smith. But equally represented — and intriguing — are more obscure practitioners with names like Alfred Gabali, Jacob Stamerjohann, Francisco Rodrigues Gomes, and Pikok. Not all were whalemen; in fact, not all were *men*, as evidenced by entries for Mary Stark, Sarah G. Smith, and other shipmasters' wives who pursued this shipboard diversion. Although the clear majority of identified scrimshaw artists are American, individuals of African, Australian, Azorean, British, Canadian, Dutch, French, German, Native North American, New Zealand, Polynesian, and Scandinavian heritage practiced the art. Extensive indexing and cross-referencing puts all of this data at the reader's command.

A lengthy and thoughtful introduction gives the reader a good grounding in the development of scrimshaw as a distinct art form. Perhaps the most useful element of this overview is the clear assertion that this study is as much

about whaling as it is about scrimshaw. It is a point that cannot be stressed too strongly or too often, for scrimshaw can only be understood in the context of the fishery that spawned and sustained it, from the pioneering Dutch and German expeditions of the seventeenth century to the labor of Azoreans in more recent times.

In light of its sharp focus and hefty price, this is by no means a work for everyone's bookshelf. By the author's own admission it is more a jumping off point for further study than a completed work. In fact, some half-dozen or so additional American scrimshanders have been identified, and at least one artist debunked, since *Dictionary of Scrimshaw Artists* went to press. Yet it is more than strictly a reference work, and for those who seek a better understanding of the world of the whaleman through the centuries, this study will remain a valuable resource for years to come.

RICHARD C. MALLEY

The Connecticut Historical Society

GEOFFREY M. FOOTNER, *The Last Generation: A History of a Chesapeake Shipbuilding Family* (Solomons, MD: Calvert Marine Museum, 1991). Xiii + 193 pages.

The shipbuilding family of this book's title is the Davis clan of Maryland. The author tells their story over five generations, from the work of John Davis in the late eighteenth century to that of Clarence Davis (1883-1936). The family produced a line of vessels whose evolution reflects changing regional and national boating needs, whether for commerce, the military, or, with the yachting age, recreation and conspicuous consumption. The vicissitudes of the family business also reflect the ebb and flow of the U.S. business cycle.

The "founding father," John, appears in records around 1790 as a shipwright on the Miles River near St. Michaels on the eastern shore of the Chesapeake. He was a craftsman of the pilot-boat type of schooner, the earliest form of the famed Baltimore clipper, which Henry Adams, incidentally, thought the most important product of the War of 1812. Unfortunately for Davis, Chesapeake shipbuilding went into a sharp slump after the war, and the shipwright never recovered his design leadership.

His two sons, George Davis (born 1790) and Isaac Davis (born 1810) shifted the family fortunes southward to Dorchester County, where timber was less depleted. They revived the family fortunes with deep-keeled pungies and schooners for the growing coastal trade. The fattest years for the family, though, came with the oystering boom of the thirty years after 1850. It was in this period that the last two generations of Davises, whose patriarchs were Marcellus (Call) Davis (born 1857) and Clarence Davis, found a new home and center of operations at Solomon's Island on Maryland's western shore of the Chesapeake Bay.

The father of the island's development was Isaac Solomon, the scion of a Wilmington, Delaware merchant family, who moved to Baltimore, where he prospered from selling the famed Chesapeake Bay oysters. Shortly before the Civil War, Solomon moved his operations down the bay to a sparsely populated island at the mouth of the Patuxent River. Solomon gave his name to the area and encouraged local shipbuilding as the demand for oystering workboats grew. This brought the Davises to the area. It was to be the permanent center of their operation.

Oyster harvesters took to the waters in John Henry Davis's bugeyes. Then Marcellus, John Henry's son, popularized the sloop and seventy-foot, two-masted bugeyes as workboats. He built eighteen between 1890 and 1898. The oyster boom subsided in the 1890s, yet Marcellus was able to diversify and lengthened his career by building tugs. After a brief interlude of financial failure, he also constructed large schooners for the Maryland-to-Maine ice, granite, and coal trade. One Davis-built trawler was even converted into a minesweeper and used by the North Atlantic fleet in World War I.

It was Clarence Davis who launched the Davis fortunes into the next stage, one of the most notable in the family's history. The Davises had never had the financial strength to match their design and construction skills, but with Clarence's entrance into the world of racing yacht construction, this changed. Yachting was not a feature of the Chesapeake scene until the early twentieth century, although the *America* and other notable yachts had been partly modeled on the earlier Chesapeake pilot topsail schooner. John Alden, among the leading yacht architects of the Boston area, seems to have drawn ideas from the bugeye and its predecessors, the log canoe and the brogan. Clarence Davis himself inherited a schooner tradition, of course, and got interested in yachts when the Davis shipyard became first a mail drop and service station and then one of the earliest marinas on the Chesapeake Bay. Clarence began to convert some of the old bugeyes into racing yachts and then built new models from scratch. Two of Davis's most famous productions were Donald Sherwood's *Seawitch* and J. Rulon Miller's and Eugene E. duPont's *High Tide*. Others were *White Cloud* and *Manitou*, raced by President John Kennedy. Davis, working with famed designers Philip Rhodes and Olin Stephens, achieved renown on the yacht ocean-racing circuit as a builder of the beautiful and long-lasting.

Geoffrey Footner has drawn his story from a great many disparate sources — logs, personal letters, and memoirs — but chiefly from the Davis Family Archives in the Calvert Marine Museum. It is a tale well told. The book's organization, particularly in the early chapters, does cause some occasional confusion. Flashbacks interjected here and there do not always have clear transitions. I also wish that the author had included more detailed descriptions of actual construction techniques, but his work tells us much. The photographs, including some old ones, are simply wonderful and will delight all those who love boats under sail.

ROBERT FALLAW

Washington College

MIKE BENT, *Steamers of the Fjords* (London: Conway Maritime Press, 1989). 8" x 11¼", cloth, 224 pages, 150 photographs, 275 line drawings and maps, printed end papers, index, foreword, and preface. £25.

Before the days of superhighways, heavy trucks, or air freight and passenger service, many a community in the world was served by small sail or steam-powered ships. Today, one of the few surviving coastal freight and passenger services exists along the Norwegian coast.

Mike Bent has completed a monumental and loving story of the Norwegian services with publication of *Steamers of the Fjords*. Preceding this book, Bent wrote *Coastal Express: Ferry to the Top of the World*. His first book covered the most northerly routes, and this second book covers the geographic areas to the south and west. His meticulous research mixes a human touch that brings to life a story covering a period of 150 years.

There was always a love-hate relationship between passengers and the ships, but love won out. Bard Kollveit, president of the Norsk Sjofartsmuseum at Bygdoynes, Oslo, in a foreword to *Steamers of the Fjord*, sums up the relationship of Norwegians to the ships. He grew up near the harbor at Odda, an industrial community in the far northern Hardangerfjord. After spelling out the importance of the little ships to coastal Norway, Kollveit asks "Why is coastal and local passenger shipping such a fascinating object of study for historians and shipping enthusiasts alike? . . . No maritime activity is more closely related to the human element — literally part of our life cycle — from birth to death. No ships were more criticized, yet none were more fondly remembered by people than the local steamers in their respective districts." Despite the less attractive features of the steamers, "For some reason, it is the happy memories which linger," Kollveit writes.

The memories, of course, are for the steam-powered ships and their triple expansion engines. Today steam has been replaced with diesels, and the ships have modern accommodations. The ship service has survived in part because of a sympathetic attitude of the Norwegian government, which wants to encourage people to live in remote areas and has given the steamers small subsidies and mail service contracts.

It is fair to say that this transportation system serving the westernmost provinces of Norway is probably without parallel anywhere in the world. If the coast of Norway were recreated in a straight line, it would be 13,000 miles long, and the small ships are an essential part of one of the world's oldest public transport systems still functioning today. One reason for their success today is that the ships run like clockwork regardless of the weather. Moreover, while a highway system and a small airport have been built in the area and may diminish the need for some of the ship service, there are still coastal areas that the highway system cannot reach, and this makes continuation of the ship service essential. The service uses the type of hub and spoke system that is a part of modern airline planning. The same general idea has existed for 150 years in the Norwegian island service. Bergen was the hub. Large ships brought cargo and passengers to this port and transshipment was made by the small steamers to coastal ports. Bergen became a huge distribution point, just as giant airports in large cities are today.

"Progress" is the term for the updating and modernization of the ships used today. But those who can remember the old steamers along the Norwegian coast have a warm and nostalgic feeling for these smart little vessels. Fortunately, *Steamers of the Fjords* and *Coastal Express* have done much to preserve the sights and smells, the irritations, and the usefulness of a magnificent public transportation system that for so many years has held together an important part of Norway. Bent and Conway Maritime Press have preserved the history of a subject dear to Norway, and all maritime enthusiasts are indebted to them for doing the job so well.

JOHN R. HERBERT

Spring Hill, Florida

Table of Contents

Winter 1992

Editor's Note 4

Articles

The American Concrete Shipbuilding Program of World War I
by WILLIAM J, WILLIAMS 5

Weather-Reporting U-boats in the Atlantic, 1944-45: The Hunt for U-248
by DAVID SYRETT 16

The Lasting Injury: The Revenue Marine's First Steam Cutters
by ROBERT M. BROWNING, JR. 25

The Transmission of Chinese Maritime Technology by the Arabs to Europe
by VASSILIOS CHRISTIDES 38

A Gratifying Testimonial to a Captain
by CHARLES DAWSON 46

News 52

Book Reviews

CHRISTOPHER MCKEE, *A Gentlemanly and Honorable Profession: The Creation of the U.S. Naval Officer Corps, 1794-1815*
by Frederick C. Leiner 55

EDWARD D. BEECHERT, *Honolulu: Crossroads of the Pacific*
by Frank Broeze 56

CHARLES A. BARTHOLOMEW, *Mud, Muscle and Miracles: Marine Salvage in the United States Navy*
by James E. Valle 57

JOHN MCPHEE, *Looking for a Ship*
by Mark D. Aspinwall 58

GERALD E. MORRIS AND LLEWELLYN HOWLAND III, EDS., *Yachting in America: A Bibliography Embracing the History, Practice, and Equipment of American Yachting and Pleasure Boating From Earliest Beginnings to Circa 1988*
by Richard A. von Doenhoff 59

JAMES D. TRACY, ED. *The Rise of Merchant Empires: Long-Distance Trade in the Early Modern World*
by Richard W. Unger 60

HERVEY GARRETT SMITH, *The Arts of the Sailor: Knotting, Splicing and Ropework*
by Richard C. Malley 61

PHILIP S. DAWSON, *British Superliners of the Sixties: A Design Appreciation of the* Oriana, Canberra, *and* QE2
by Peter K.H. Mispelkamp 62

JOHN R. SIMMONS, *Campaign Ribbons*
by Tyrone G. Martin 62

F. ROSS HOLLAND, *Great American Lighthouses*
by John R. Herbert 63

BRIAN LAVERY, *Building the Wooden Walls: The Design and Construction of the 74-gun Ship* Valiant
by John H. Harland 64

REV. HENRY T. CHEEVER, *The Whale and his Captors; or, the Whaleman's Adventures, and the Whale Biography, as Gathered on the Homeward Cruise of the* Commodore Preble;

JOHN WILSON, *The Cruise of the* Gipsy. *The Journal of John Wilson, Surgeon on a Whaling Voyage to the Pacific Ocean, 1839-1843*, ed. Honore Forster;

WILLIAM DALTON, *The Dalton Journal: Two Whaling Voyages to the South Seas, 1823-1829*, ed. Niel Gunson
by Briton C. Busch 66

EDWYN GRAY, *Operation Pacific: The Royal Navy's War Against Japan, 1941-1945*
by Lewis Bernstein 67

MICHAEL L. HADLEY AND ROGER SARTY, *Tin Pots and Pirate Ships: Canadian Naval Forces and German Sea Raiders, 1880-1918*
by Gary E. Weir 68

DAVID P.H. WATSON, *The Captains Watson and the Empire Line*
by Frank O. Braynard 69

Table of Contents

Spring 1992

Editor's Note 76

Articles

An Apple and an Orange: Two *Constellations* at Gosport, 1853-1855 77
by DANA M. WEGNER

Fouled Anchors? Foul Blow 94
by EVAN RANDOLPH

The Caribbean Theater Transformed: Britain, France, Germany, and the U.S., 1900-1906 102
by RICHARD H. COLLIN

The Crusade of Emperor Frederick II, 1220-29: The Implications of the Maritime Evidence 113
by JOHN H. PRYOR

News 133

Book Reviews

WILLIAM D. PHILLIPS AND CARLA RAHN PHILLIPS, *The Worlds of Christopher Columbus*
by Briton C. Busch 134

G. FOSTER PROVOST, *Columbus: An Annotated Guide to the Scholarship on His Life and Writings, 1750-1988;*

DAVID HENIGE, *In Search of Columbus: The Sources for the First Voyage*
by Charles R. Schultz 135

JAMES C. BRADFORD, ED., *Admirals of the New Steel Navy: Makers of the American Naval Tradition, 1880-1930*
by Frederick S. Harrod 136

JORDAN VAUSE, *U-boat Ace: The Story of Wolfgang Lüth*
by Michael A. Hadley 137

MICHAEL SIMPSON, *Anglo-American Naval Relations, 1917-1919*
by F. M. McKee 138

JAMES A. LEWIS, *The Final Campaign of the American Revolution: Rise and Fall of the Spanish Bahamas*
by David Syrett 139

GEORGE NAU BURRIDGE, *Green Bay Workhorses: The Nau Tug Line*
by James P. Barry 140

BERNARD ET MIRIELLE DE MAISONNEUVE, *Le Maidstone: miroir d'une mémoire*
by Emily Cain 141

Table of Contents

Summer 1992

Editor's Note 148

Articles

A Romance en Route: The Advertising Fiction of the Detroit & Cleveland Steam Navigation Company
by VICTORIA BREHM 149

The Origins and Development of the T2 Tanker
by THOMAS WILDENBERG 155

Descriptions of the Shallop in Western Europe and the New World, 1587-1671
by JOSEPH M. HERBERT 167

Autonomy, Politics, and Embargo in New London, Connecticut, 1807-1809
by GLENN S. GORDINIER 180

The China Trade Brig *John Gilpin*
by THOMAS HOLLYDAY 187

Notes and Documents

Assuming a First Command: Captain Caleb Franklin Carver's Letter to Captain Lincoln Alden Colcord
by PARKER BISHOP ALBEE, JR. 195

Query and Response 199

News 203

Book Reviews

LIONEL CASSON AND J. RICHARD STEFFY, EDS. *The Athlit Ram*
by Shelley Wachsmann 204

PAUL H. SILVERSTONE, *Warships of the Civil War Navies*
by A. Robert Holcombe, Jr. 206

DONALD L. CANNEY, *The Old Steam Navy. Volume 1: Frigates, Sloops, and Gunboats, 1815-1885*
by John D. Milligan 208

GEORGE NAU BURRIDGE, *Green Bay Workhorses: The Nau Tug Line*
by James P. Barry 209

J. R. BRUIJN AND W. F. J. MORZER BRUYNS, EDS., *Anglo-Dutch Mercantile Marine Relations, 1700-1850*
by Simon Ville 210

WILLIAM MORRISON ROBINSON, JR., *The Confederate Privateers*
by Frederick C. Leiner 211

SIR ERNEST SHACKLETON, *South: The Story of Shackleton's Last Expedition, 1914-1917*, ed. Peter King
by C. Jeffrey Stann 212

GARY E. WEIR, *Building American Submarines, 1914-1940*
by Richard A. von Doenhoff 213

Table of Contents

Fall 1992

Editor's Note 220

Articles

The Politics of British Naval Failure, 1775-1777
by DANIEL A. BAUGH 221

The Tonnage of Europe's Merchant Fleets, 1300-1800
by RICHARD W. UNGER 247

Query and Response 262

News 266

Book Reviews

JOHN B. HATTENDORF, ED., *The Influence of History on Mahan*
by Richard W. Turk 267

ERIC C. RUST, *Naval Officers Under Hitler: The Story of Crew 34*
by Michael L. Hadley 268

ROBERT S. WEDDLE, *The French Thorn. Rival Explorers in the Spanish Sea, 1682-1762*
by Carla Rahn Phillips 269

RICHARD ELLIS, *Men and Whales*
by Kenneth R. Martin 270

COMMANDER TONY GERMAN, *The Sea Is At Our Gates: The History of the Canadian Navy*
by Gerald E. Panting 271

ALAN D. WATSON, *Wilmington, Port of North Carolina*
by James M. Morris 272

A. A. HOEHLING, *The Fighting Liberty Ships: A Memoir*
by W. M. P. Dunne 273

STUART M. FRANK, *Dictionary of Scrimshaw Artists*
by Richard C. Malley 274

GEOFFREY M. FOOTNER, *The Last Generation: A History of a Chesapeake Shipbuilding Family*
by Robert Fallaw 275

MIKE BENT, *Steamers of the Fjords*
by John R. Herbert 276

Index to Volume 52 281

Index to Volume 52

Dates in parentheses after the names of vessels indicate either the year of building (if not in italics) or the year of the reference (if in italics). Vessels having compound names are indexed under the initial letter of the *first* word. A list of vessels having compound names, arranged alphabetically by last names, follows the index. This index was prepared by Mrs. Geraldine Ayers of the staff of the Peabody Museum of Salem - Essex Institute.

Adams, U.S. Navy frigate (1799), 89n, 90, 91n
Admirals of the New Steel Navy: Makers of the American Naval Tradition, 1880-1930, by James C. Bradford, ed., reviewed, 136
Aekay, U.S. tanker (1942), 161, 162, 166, 167; body plan of, 164
Albee, Parker Bishop, Jr., "Assuming a First Command: Captain Caleb Franklin Carver's Letter to Captain Lincoln Alden Colcord," 195-198
Alert, revenue cutter, 27
Alexander, supply ship *(1850s)*, 50
al-Kāmil (al-Malik al-Kāmil), Egyptian sultan, 113, 114, 122, 128-132
America, schooner yacht *(1851)*, 52
"American Concrete Shipbuilding Program of World War I, The," by William J. Williams, 5-15
Amsterdam, Dutch merchant ship (1748), 210
Anglo-American Naval Relations, 1917-1919, by Michael Simpson, reviewed, 138
Anglo-Dutch Mercantile Marine Relations, 1700-1850, by J. R. Bruijn and W. F. J. Morzer Bruyns, eds., reviewed, 210
an-Nāsir Dā'ūd, ruler of Damascus, 113, 128-130, 132
"Apple and an Orange, Two *Constellations* at Gosport, 1853-1855, An" by Dana M. Wegner, 77-93
Arts of the Sailor, The: Knotting, Splicing and Ropework, by Hervey Garrett Smith, reviewed, 61
Aspinwall, Mark D., review by, 58
"Assuming a First Command: Captain Caleb Franklin Carver's Letter to Captain Lincoln Alden Colcord," by Parker Bishop Albee, Jr., 195-198
Athlit Ram, The, by Lionel Casson and J. Richard Steffy, eds., reviewed, 204
Aubin, Nicolas, author of *Dictionnaire de Marine* (1702), 171-175, 178, 179
Aurora, ship *(1914-16)*, 212
"Autonomy, Politics, and Embargo in New London, Connecticut, 1807-1809," by Glenn S. Gordinier, 180-186

Baker, William A., 77, 168, 169, 171, 175, 179, 202
Barnett, J. W., U.S. Shipping Board, 156
Barron, Captain Samuel, 199, 202
Barry, James P., review by, 209
Bartholomew, Charles A., *Mud, Muscle and Miracles: Marine Salvage in the United States Navy*, reviewed, 57
Baugh, Daniel A., "The Politics of British Naval Failure, 1775-1777," 221-246
BdU *(Befehlshaber der unterseeboote)*, 16, 17, 21
Beechert, Edward D., *Honolulu: Crossroads of the Pacific*, reviewed, 56
Bent, Mike, *Steamers of the Fjords*, reviewed, 276
Bernstein, Lewis, review by, 67
Bibb, George M., Secretary of the Treasury, 27, 28, 29, 30, 31
Bibb, Hunter wheel steamer (1845), 27-30, 33-36; photo of, 33
Biddle, Captain Nicholas, 231, 233
Bowling, Commander J. F., 20-23
Bradford, James C., ed., *Admirals of the New Steel Navy: Makers of the American Naval Tradition, 1880-1930*, reviewed, 136
Braynard, Frank O., review by, 69
Brehm, Victoria, "A Romance en Route: The Advertising Fiction of the Detroit & Cleveland Steam Navigation Company," 149-154
British fleet approaching Staten Island (1776), illustration of, 230; landing at Rhode Island (1776), illustration of, 232
British Superliners of the Sixties: A Design Appreciation of the Oriana, Canberra, *and* QE2, by Philip S. Dawson, reviewed, 62
Broeze, Frank, review by, 56
Browning, Robert M., Jr., "The Lasting Injury: The Revenue Marine's First Steam Cutters," 25-37
Bruijn, J. R., historian of the Dutch navy, 248
Bruijn, J. R., and W. F. J. Morzer Bruyns, eds., *Anglo-Dutch Mercantile Marine Relations, 1700-1850*, reviewed, 210
Building American Submarines, 1914-1940, by Gary E. Weir, reviewed, 213
Building the Wooden Walls: The Design and Construction of the 74-gun Ship Valiant, by Brian Lavery, reviewed, 64
Burgoyne, General John, 227, 235, 239
Burridge, George Nau, *Green Bay Workhorses: The Nau Tug Line*, reviewed, 209
Busch, Briton C., reviews by, 66, 134

Cadmus, ship *(1824)*, 49
Cain, Emily, review by, 140
Campaign Ribbons, by John R. Simmons, reviewed, 62
Campbell, Captain Hugh, 202, 264
Canney, Donald L., *The Old Steam Navy. Volume 1: Frigates, Sloops, and Gunboats, 1815-1885*, reviewed, 208
Captains Watson and the Empire Line, The, by David P. H. Watson, reviewed, 69
"Caribbean Theater Transformed, The: Britain, France, Germany, and the U.S., 1900-1906," by Richard H. Collin, 102-112
carracks, Portuguese, illustration of, 257
Carver, Captain Caleb Franklin, 195-197; photo of, 197
Casson, Lionel and J. Richard Steffy, eds. *The Athlit Ram*, reviewed, 204
Castro, Cipriano, 105, 106
Chapelle, Howard I., 76, 77, 81n, 83n, 86n, 89n, 262
Charles I, King of England (1625-1649), 248, 253
Charles V, Holy Roman Emperor (1519-1556), 253
Charles Mallory, ship *(1852)*, 49
Charles W. Morgan, whaler (1841), 92
Charlotte A. Littlefield, bark *(1879)*, 195, 197, 198
Cheever, Rev. Henry T., *The Whale and his Captors; or, the Whaleman's Adventures, and the Whale Biography, as Gathered on the Homeward Cruise of the* Commodore Preble, reviewed, 66
chelandre (oared transport vessels; also *chelandia, salandria*), 124-128, 131, 132; illustration of, 125
Chesapeake, U.S. Navy frigate (1799), 200, 265
"China Trade Brig *John Gilpin*, The," by Thomas Hollyday, 187-194
Christian, 449-ton ship, 48
Christides, Vassilios "The Transmission of Chinese Maritime Technology by the Arabs to Europe," 38-45
Cimarron, U.S. tanker (1939), 159n, 160, 166, 167; photo of, 162; body plan of, 164
Cincinnati (1902), 105

Cleopatra's Barge, yacht (1816), 52
Colcord, Jane Sweetser, 197-198
Colcord, Joanna Carver, 195-198
Colcord, Captain Lincoln Alden, 195-198; photo of, 196
Colcord, Lincoln, 195, 197-198
Collin, Richard H., "The Caribbean Theater Transformed: Britain, France, Germany, and the U.S., 1900-1906," 102-112
Columbus: An Annotated Guide to the Scholarship on His Life and Writings, 1750-1988, by G. Foster Provost, reviewed, 135
Columbus, Christopher, 135-136, 220, 266
Comet, ship *(1852)*, 49
COMINCH, 18, 20, 23
Concrete ship, illustration of, 8
Confederate Privateers, The, by William Morrison Robinson, Jr., reviewed, 211
Congress, U.S. Navy frigate (1799, *1805)*, 199-202, 264-265; Ware Sail Plan of, 201
Constellation, U.S. Navy frigate (1797, 1853-55), 76, 77-93, 94-101, 148, 199-202, 262-265; keel plan of, 96-97; transverse sections plan of, 98-99; hold plan of, 101
Coste, Captain Napoleon, 32, 34
Courageux, French 74-gun ship *(1779)*, 65
Cruise of the Gipsy. *The Journal of John Wilson, Surgeon on a Whaling Voyage to the Pacific Ocean, 1839-1843, The*, by John Wilson, ed. Honore Forster, reviewed, 66
"Crusade of Emperor Frederick II, 1220-29: The Implications of the Maritime Evidence, The," by John H. Pryor, 113-132
Currin, Captain Caleb, 31

Dallas, Hunter wheel steamer (1846), 27, 28, 30, 33-36
Dalton Journal, The: Two Whaling Voyages to the South Seas, 1823-1829, by William Dalton, ed. Niel Gunson, reviewed, 66
Dalton, William, *The Dalton Journal: Two Whaling Voyages to the South Seas, 1823-1829*, ed. Niel Gunson, reviewed, 66
Damixella, sailing ship (1248), 116
Dana, Richard Henry, Jr., 48, 49
Daniels, Josephus, Secretary of the Navy, 7
Dawson, Charles, "A Gratifying Testimonial to a Captain," 46-54
Dawson, Philip S., *British Superliners of the Sixties: A Design Appreciation of the* Oriana, Canberra, *and* QE2, reviewed, 62
de Maisonneuve, Bernard et Mirielle, *Le* Maidstone: *miroir d'une mémoire*, reviewed, 140
Decatur, Captain Stephen, 202, 264
Deering, D. H., customs collector, Sag Harbor, 183
Delano, Edward H., naval constructor, Gosport Navy Yard, 81, 82
"Descriptions of the Shallop in Western Europe and the New World, 1587-1671," by Joseph M. Herbert, 167-179
Detroit, HMS *(1812, 1813)*, 266
Detroit, 2,000-ton cruiser *(1904)*, 109; photo of, 110
Detroit & Cleveland Steam Navigation Company, 149, 150, 151, 153, 154; illustrations from advertising novels of, 151, 153
Dewey, Admiral George, 102, 103, 106, 107, 109, 110
Dictionary of Scrimshaw Artists, by Stuart M. Frank, reviewed, 274
Dillingham, Commander Albert C., 109-111
Dönitz, Grand Admiral Karl, 16
Doughty, William, naval architect, 85, 89n
Drewry, Confederate gunboat, 207
Dunbritton, iron windjammer, (1875, *1867, 1906)*, 50, 51; photo of, 51
Dunne, W. M. P., review by, 273; letters to the editor from, 202, 265
Dutch cargo ships, seventeenth-century illustration of, 259

Edson, Merritt A., letters to the editor from, 199-201, 263-265
Elizabeth I, Queen of England (1558-1603), 248, 250-254, 258-259
Ellis, Richard, *Men and Whales*, reviewed, 270
Emergency Fleet Corporation, 5-7, 9-15
Emkay, U.S. tanker (also *Patuxent)*, 162
Endurance, ship *(1914-16)*, 212
English brig with captured American vessels, illustration of, 235
Ericsson, John, 26-28, 30-35
Esso Albany II, U.S. tanker (1941), 162, 166; body plan of, 164
Esso Gettysburg, U.S. tanker (1942), 165, 166
Excelsior, Norwegian bark *(1906)*, 51
Eyre, Captain Joseph, 188-192, 194

Faith, 4,500-ton concrete hull vessel, *(1917-18)*, 6, 7, 9; photo of, 6
Falke, German cruiser *(1906)*, 111
Fallaw, Robert, review by, 275
Ferro Concrete Construction Company, 9, 11
Fifth Crusade, 115, 116, 118, 122, 124, 128, 129, 132
Fighting Liberty Ships, The: A Memoir, by A. A. Hoehling, reviewed, 273
Final Campaign of the American Revolution, The: Rise and Fall of the Spanish Bahamas, The, by James A. Lewis, reviewed, 139
Fire bombs, illustrations of, 41-42
Fleetwing, yacht *(1866)*, 51
Flying Cloud, ship *(1852)*, 49
Footner, Geoffrey M., *The Last Generation: A History of a Chesapeake Shipbuilding Family*, reviewed, 275
"Forgotten War: The United States Merchant Marine During WWII, The" National Archives exhibit, 53
Foster, Captain Winslow, 29-31, 33
Fougnier American Steel Concrete Shipbuilding Company, 9, 11, 12
"Fouled Anchors? Foul Blow," by Evan Randolph, 94-101
Frank, Stuart M., *Dictionary of Scrimshaw Artists*, reviewed, 274
Fraser, Captain Alexander, 27-31, 33, 35, 36
Frederick II, Holy Roman Emperor (1220-1245), 113-115, 123-132
French Thorn, The. Rival Explorers in the Spanish Sea, 1682-1762, by Robert S. Weddle, reviewed, 269

Gallatin, Albert, Secretary of the Treasury, 183n, 185, 186
Garcia de Palacio, Dr. Diego, author of *Instruction Nauthica* (1587), 168, 170, 178
Gelston, David, customs collector, 183, 185
Gentlemanly and Honorable Profession, A: The Creation of the U.S. Naval Officer Corps, 1794-1815, by Christopher McKee, reviewed, 55
George III, King of England (1760-1820), 222, 223, 225, 227-229, 240-242, 244
Germ, steamer (1841), 25
Germain, Lord George, British secretary of state for the American colonies, 222, 227n, 229, 235, 236, 238, 239, 241, 242, 244, 246
German, Commander Tony, *The Sea Is At Our Gates: The History of the Canadian Navy*, reviewed, 271
Golden Fleece, ship *(1852)*, 49
Gordinier, Glenn S. "Autonomy, Politics, and Embargo in New London, Connecticut, 1807-1809," 180-186
Gradual Increase Act, 79, 80, 82, 91
Grafton, British cruiser *(1901)*, 106
Graham, William A., Secretary of the Navy, 95, 101
"Gratifying Testimonial to a Captain, A," by Charles Dawson, 46-51
Graves, Admiral Samuel, 224-227, 236, 237, 240, 241, 245, 246
Gray, Edwyn, *Operation Pacific: The Royal Navy's War Against Japan, 1941-1945*, reviewed, 67
Great American Lighthouses, by F. Ross Holland, reviewed, 63
Great Western, British side-wheel steamer *(1844)*, 27
Great White Fleet, 102, 111
Greek Fire, 38, 41, 44, 125
Green Bay Workhorses: The Nau Tug Line by George Nau Burridge, reviewed, 209
Grenier, Robert, 169, 179

Griffin, sixteenth-century English armed ship, illustration of, 251
Griper, British exploration vessel, 271

Hadley, Michael L. and Roger Sarty, *Tin Pots and Pirate Ships: Canadian Naval Forces and German Sea Raiders, 1880-1918*, reviewed, 68
Hadley, Michael L., reviews by, 137, 268
Hague, Robert L., General Manager, Standard Oil Company, 159, 160
Hamond, Captain Andrew Snape, 231-233, 238
Hampton, Confederate gunboat, 207
harārīq (Moslem war galleys), 123
Harland, John H., review by, 64
Harlem Heights, U.S. tanker (also *Suamico*, 1942), photo of, 165
Harrod, Frederick S., review by, 136
Hattendorf, John B., ed., *The Influence of History on Mahan*, reviewed, 267
Hay-Herrán Treaty, 105, 107
Hayter, USS, destroyer escort *(1944-45)*, 20-24
Hecla, British exploration vessel, 271
Henige, David, *In Search of Columbus: The Sources for the First Voyage*, reviewed, 135
Henrietta, yacht *(1866)*, 52
Henry VIII, King of England (1509-1547), 252
Herbert, John R., reviews by, 63, 276
Herbert, Joseph M., "Descriptions of the Shallop in Western Europe and the New World, 1587-1671," 167-179
High Tide, racing yacht, 276
Hoehling, A. A., *The Fighting Liberty Ships: A Memoir*, reviewed, 273
Holcombe, Jr., A. Robert, review by, 206
Holland IV, U.S. submarine, *(1900)*, 213
Holland, F. Ross, *Great American Lighthouses*, reviewed, 63
Hollyday, Thomas, "The China Trade Brig *John Gilpin*," 187-194
Honolulu: Crossroads of the Pacific, by Edward D. Beechert, reviewed, 56
Honorius III, Pope (1216-1227), 114, 123, 124
Hornet, 10-gun sloop *(1804-6)*, 201, 202
Howard, Captain William A., 26-36
Howe, Admiral Richard Viscount, 222, 229-231, 233-242, 244-246; portrait of, 237
Howe, General Sir William, 229
Howland III, Llewellyn and Gerald E. Morris, eds., *Yachting in America: A Bibliography Embracing the History, Practice, and Equipment of American Yachting and Pleasure Boating From Earliest Beginnings to Circa 1988*, reviewed, 59
Hubbard, Captain John, 108, 109
Hubbard, USS, destroyer escort *(1944-45)*, 20, 22-24; photo of, 22
Hudson, bark *(1879)*, 195
Humphreys, Joshua, naval architect, 85, 86, 88, 89
Humphreys, Samuel, naval constructor, 30
Hunter, Lieutenant William W., 25-36
Hunter wheel, patent drawing of, 26; on half model, 28-29
Huntington, Jedidiah, New London customs collector, 180-186, portrait of, 182
Hurley, Edward Nash, Emergency Fleet Corporation, 5, 7, 9-15; photo of, 13

Illyria, yacht, 53
Influence of History on Mahan, The, by John B. Hattendorf, ed., reviewed, 267
In Search of Columbus: The Sources for the First Voyage, by David Henige, reviewed, 135
Invincible, French 74-gun ship *(1747-1758)*, 64-65

J. W. Van Dyke, turbo-electric tanker, 163
James Harrod, Liberty ship *(1945)*, 274
Jefferson, President Thomas, 180, 185, 186
Jefferson, propeller steamer (1845), 27, 34-36
John Gilpin, China trade brig (1831), 187-194; account of materials salvaged from, 193
John Lesher, Liberty ship *(1943)*, 273

Kathleen, whaler *(1902)*, 271
Kennedy, Captain William, 46, 48-51

Lagoda, whaler, 271
Land, Admiral Emory S., 158-160
Last Generation, The: A History of a Chesapeake Shipbuilding Family, by Geoffrey M. Footner, reviewed, 275
"Lasting Injury: The Revenue Marine's First Steam Cutters, The," by Robert M. Browning, Jr., 25-37
Laudonniere, René, French explorer, 176
Laurel, 808-ton ship, *(1854)*, 50
Lavery, Brian, *Building the Wooden Walls: The Design and Construction of the 74-gun Ship* Valiant, reviewed, 64
Lee, Ezra, customs surveyor, Lyme, 184
Legare, propeller steamer (1844), 27, 28, 30-34, 36
Leiner, Frederick C., reviews by, 55, 211
Lenthall, John, naval constructor, 79, 81, 84-86, 91, 94-97, 101
Lewis, James A., *The Final Campaign of the American Revolution: Rise and Fall of the Spanish Bahamas*, reviewed, 139
Liberty Shipbuilding Company, 9, 11, 12
Little Rebel, CSS/USS, 207
Lombarda, sailing ship (1248), 116
Looking for a Ship, by John McPhee, reviewed, 58
Loper, Richard L., shipbuilder, 30-32, 34, 36
Louis IX, King of France (1226-1270), 114-119, 121-124, 126, 127, 132
Lundeberg, Philip, mention, 202
Lyman, John, 77, 87n, 91n
Lynaugh, Kevin, 77, 78, 85, 86

Macedonian, U.S. Navy frigate *(1854)*, 83, 84
Macon, CSS, gunboat, 207
Maidstone, *Le: miroir d'une mémoire*, by Bernard et Mirielle de Maisonneuve, reviewed, 140
Mainwaring, Sir Henry, author of *The Seaman's Dictionary* (1644), 175
Malley, Richard C., reviews by, 61, 274
Manitou, racing yacht, 276
Martin, Kenneth R., review by, 270
Martin, Tyrone G., review by, 62
Mayflower, presidential yacht *(1904)*, 109
McCumber, Senator Porter J., 5, 6, 10, 11, 13, 15
McKee, F. M., review by, 138
McKee, Christopher, *A Gentlemanly and Honorable Profession: The Creation of the U.S. Naval Officer Corps, 1794-1815*, reviewed, 55
McKinley, President William, 102
McLane, Hunter wheel steamer (1845), 27, 29-34, 36; photo of, 34
McLean, Captain Thomas, 105
McPhee, John, *Looking for a Ship*, reviewed, 58
McRae, CSS, 207
Men and Whales, by Richard Ellis, reviewed, 270
Michigan, iron-hulled gunboat (1842), 26
Milligan, John D., review by, 208
Mispelkamp, Peter K. H., review by, 62
Mobile, CSS, 207
Mobilfuel, U.S. tanker, 160
Mobilube, U.S. tanker, 160
Monroe Doctrine, 102, 105-107, 110, 112
Mont Blanc, ammunition ship *(1917)*, 266
Morison, Samuel Eliot, 17, 134
Morris, James M., review by, 272

Morris, Gerald E. and Llewellyn Howland III, eds., *Yachting in America: A Bibliography Embracing the History, Practice, and Equipment of American Yachting and Pleasure Boating From Earliest Beginnings to Circa 1988*, reviewed, 59
Morris, Robert, 231-233
Mud, Muscle and Miracles: Marine Salvage in the United States Navy, by Charles A. Bartholomew, reviewed, 57

Nansemond, Confederate gunboat, 207
Nashville, gunboat (1895), 108, 109; photo of, 108
Naval Officers Under Hitler: The Story of Crew 34, by Eric C. Rust, reviewed, 268
Nelson, Senator Knute, 6, 9, 10, 14
Nile River, 114, 116-122, 124, 125, 131, 132; drawing of shoreline of Damietta branch of, 117; drawing of approaches to Damietta mouth of, 118; drawing of delta of, 119; drawing of Damietta branch of at Damietta and Mansurah, 120; barometric pressure and wind direction charts of, 121, 132
Noah's Ark, illustration of, 44
Nones, Captain Henry B., 28, 31, 32
North, Lord Frederick, British prime minister, 222-227, 229, 231, 233-235, 239-241, 243-246

Ogden, Lieutenant William S., 32
Old Steam Navy, The, Volume 1: Frigates, Sloops, and Gunboats, 1815-1885 by Donald L. Canney, reviewed, 208
Operation Pacific: The Royal Navy's War Against Japan, 1941-1945, by Edwyn Gray, reviewed, 67
Oppenheim, Michael, historian of the English navy, 248
Oregon, U.S. battleship *(1898)*, 103
"Origins and Development of the T2 Tanker, The," by Thomas Wildenberg, 155-166
Otter, USS, destroyer escort *(1944-45)*, 20-24; photo of, 21
Ottinger, First Lieutenant Douglas, 30, 33, 35

"Pacific Voyages of Exploration," Peabody Museum of Salem exhibit, 133
Palliser, Vice Admiral Sir Hugh, 225, 226, 228, 229, 236n, 240, 242, 243, 245, 246
Palmer, John, customs surveyor, 183-185
Panther, German cruiser (1901), 103, 111; photo of, 104
Panting, Gerald E., review by, 271
Paradisus, sailing ship (1248), 116
Parker, Commodore Sir Peter, 231, 233
Patuxent, U.S. tanker, photo of, 162
Philip II, King of Spain (1556-1598), 253, 256, 257
Phillips, Carla Rahn, review by, 269
Phillips, William D. and Carla Rahn Phillips, *The Worlds of Christopher Columbus*, reviewed, 134
Piez, Charles, Emergency Fleet Corporation, 5, 9-15; photo of, 13
Pilgrim, U.S. brig, 48
Pinguin, Nazi raider *(1941)*, 271
Plover, ship, 49
"Politics of British Naval Failure, 1775-1777, The," by Daniel A. Baugh, 221-246
Polk, side-wheel steamer (1847), 32-36
Polland, Leon, 77, 78, 80, 83, 86-89, 91, 92, 262
Princess Royal, 1,109-ton ship *(1841)*, 46
Prohibitory Act, 223, 228, 236, 238, 241
Provost, G. Foster, *Columbus: An Annotated Guide to the Scholarship on His Life and Writings, 1750-1988*, reviewed, 135
Pryor, John H., "The Crusade of Emperor Frederick II, 1220-29: The Implications of the Maritime Evidence," 113-132

Randolph, American frigate *(1777)*, 233
Randolph, Evan, *"Fouled Anchors?* Foul Blow," 94-101; letter to the editor from, 201-202; 263-265
Ratliff, Colan, 77, 78, 84, 86
Raven, yacht *(1835)*, 52
Redfield, William C., Secretary of Commerce, 7, 9, 15
Restraining Acts, 223-226
Revenue Marine Service, 25, 31-33, 36, 37
Ribault, Captain John, French explorer, 176
Rise of Merchant Empires, The: Long-Distance Trade in the Early Modern World, by James D. Tracy, ed., reviewed, 60
Robert H. Colley, turbo-electric tanker, 163
Robinson, Roy H., 5, 6, 10
Robinson, William Morrison, Jr., *The Confederate Privateers*, reviewed, 211
Rodgers, Commodore John, 199, 202, 264
Roff, Peter W., 188n, 192, 194
"Romance en Route, A: The Advertising Fiction of the Detroit & Cleveland Steam Navigation Company," by Victoria Brehm, 149-154
Roosevelt, Franklin, 89
Roosevelt, President Theodore, 102, 103, 105-112
Rousseau, Admiral H. H., 7, 9, 10
Roux, Antoine, marine artist, 199-202, 264-265; painting by, 200
Runyan, Timothy J., editorials by, 4, 76, 148, 220
Rust, Eric C., *Naval Officers Under Hitler: The Story of Crew 34*, reviewed, 268

"Sacrifice and Valor: The U.S. Coast Guard of WWII," Coast Guard Museum exhibit, 53-54
"Sailing for Pleasure: A History of New England Yachting," Peabody Museum of Salem exhibit, 52-53
salandria (oared transport vessels, see also *chelandre)*, drawing of, 126
Sanctus Franciscus, sailing ship (1248), 116
Sanctus Spiritus, sailing ship (1248), 116
Sandwich, Lord (John Montagu), First Lord of the Admiralty, 222, 223, 225-228, 234, 236-246; portrait of, 221
San Francisco Shipbuilding Company, 7, 9, 11, 13
Sarty, Roger and Michael L. Hadley, *Tin Pots and Pirate Ships: Canadian Naval Forces and German Sea Raiders, 1880-1918*, reviewed, 68
Schantz, Arnold Augustus, 149, 150, 153, 154
Schultz, Charles R., review by, 135
Schwab, Charles M., Emergency Fleet Corporation, 11-14; photo of, 12
Sea Is At Our Gates: The History of the Canadian Navy, The, by Commander Tony German, reviewed, 271
Seamen, ship *(1852)*, 49
Seawitch, racing yacht, 276
Shackleton, Sir Ernest, *South: The Story of Shackleton's Last Expedition, 1914-1917*, ed. Peter King, reviewed, 212
shallops, 167-179; illustrations of, 170, 171, 172
shawānī (Moslem galleys), 123
ships on the Scheldt River, illustration of, 249
Shuldham, Admiral Molyneux, 224-226, 228, 229, 236, 240, 241
Silverstone, Paul H., *Warships of the Civil War Navies*, reviewed, 206
Simmons, John R., *Campaign Ribbons*, reviewed, 62
Simpson, Michael, *Anglo-American Naval Relations, 1917-1919*, reviewed, 138
single stern rudder, 38-41; illustrations of, 40
Smith, Hervey Garrett, *The Arts of the Sailor: Knotting, Splicing and Ropework*, reviewed, 61
South: The Story of Shackleton's Last Expedition, 1914-1917, by Sir Ernest Shackleton, ed. Peter King, reviewed, 212
Southern Cross, clipper ship *(1852)*, 49
Sovereign of the Seas, clipper ship *(1852)*, 49
Sparrow-hawk exhibit, Pilgrim Society, 133

Spencer, John C., Secretary of the Treasury, 26, 27
Spencer, Hunter wheel steamer (1844), 27-31, 34, 36
Spray, Confederate steamer, 207
Spray, yacht, *(1895-98)*, 53, photo of 53
Standley, Admiral William H., 157n, 158-159
Stann, C. Jeffrey, review by, 212
Stanvac Melbourne, U.S. tanker, (1941), 161, 167: photo of, 163, body plan of, 164
Steamers of the Fjords, by Mike Bent, reviewed, 276
Steffy, J. Richard and Lionel Casson, eds. *The Athlit Ram*, reviewed, 204
Stella Lykes, container ship, 58-59
Stonehorse Jr., 23-foot yacht (1932), 53
Suamico, U.S. tanker (also *Harlem Heights*, 1942), photo of, 165
Suchet, French cruiser *(1902)*, 106
Syrett, David, "Weather-Reporting U-boats in the Atlantic, 1944-45: The Hunt for U-248," 16-24; review by, 139

Table, Characteristics of Shipping Board Bureau's T2 Design, 157
Table, Characteristics of Sun's T2 Design, 161
Table, Comparison of Dimensions of Shallops, 178
Table, Early Steam Vessels of the Revenue Marine, 36-37
Table, Evolution of the T2-SE-A3 Design, 166
Table, Tonnage of the English Merchant Marine, 1560-1629, 254
Table, Tonnage of Merchant Marines in Europe, 1300-1800, 260-261
Tampico, T2 tanker *(1944)*, 273-274
taride (Moslem transport galleys), 116, 117, 122, 123, 126, 127; drawing of, 126
Taylor, Henry C., Navy General Board, 106, 107, 109, 110
Tennessee, CSS, 207
Thomson, George, shipbuilder, 46
Tin Pots and Pirate Ships: Canadian Naval Forces and German Sea Raiders, 1880-1918, by Michael L. Hadley and Roger Sarty, reviewed, 68
"Titanic," Mystic Seaport Museum exhibit, 54
"Tonnage of Europe's Merchant Fleets, 1300-1800, The," by Richard W. Unger, 247-261
Tracy, James D., ed., *The Rise of Merchant Empires: Long-Distance Trade in the Early Modern World*, reviewed, 60
"Transmission of Chinese Maritime Technology by the Arabs to Europe, The," by Vassilios Christides, 38-45
Triumph, British 74-gun ship *(1757)*, 65
Truxtun, Commodore Thomas, 83
Turk, Richard W., review by, 267

U-248, German U-boat *(1944-45)*, 16, 19-24
U-1053, German U-boat *(1944)*, 17-20
U-boat Ace: The Story of Wolfgang Lüth, by Jordan Vause, reviewed, 137
Unger, Richard W., review by, 60
Unger, Richard W., "The Tonnage of Europe's Merchant Fleets, 1300-1800," 247-261
Union, steamship (1843), 26, 27
United States Shipping Board, 5-7, 9, 10, 12-15

Valiant, 74-gun British ship (1759), 64-66
Valle, James E., review by, 57
Varian, USS, destroyer escort *(1944-45)*, 20, 22, 24
Vause, Jordan, *U-boat Ace: The Story of Wolfgang Lüth*, reviewed, 137
Venice, fifteenth-century illustration of, 255
Vesta, yacht *(1866)*, 52
Ville, Simon, review by, 210
Vogel, Walther, 247, 249
Von Doenhoff, Richard A., reviews by, 59, 213

Wachsmann, Shelley, review by, 204
Walker, Robert, Secretary of the Treasury, 29-36
Wallace, 762-ton ship (1840, *1841-58)*, 46-50
Ware, Charles, 264; drawing by, 201
Warships of the Civil War Navies, by Paul H. Silverstone, reviewed, 206
Waters, David W., 248
Watson, Alan D., *Wilmington, Port of North Carolina*, reviewed, 272
Watson, David P. H., *The Captains Watson and the Empire Line*, reviewed, 69
"Weather-Reporting U-boats in the Atlantic, 1944-45: The Hunt for U-248," by David Syrett, 16-24
Weddle, Robert S., *The French Thorn. Rival Explorers in the Spanish Sea, 1682-1762*, reviewed, 269
Weetamoe, J-boat, 52
Wegner, Dana M., 76; "An Apple and an Orange: Two *Constellations* at Gosport, 1853-1855," 77-93; 94, 96, 97, 100, 101, 263; letter to the editor from, 262-263
Weir, Gary E., *Building American Submarines, 1914-1940*, reviewed, 213
Weir, Gary E., review by, 68
Wells, British gunboat *(1774)*, 224
Whale and his Captors, The; or, the Whaleman's Adventures, and the Whale Biography, as Gathered on the Homeward Cruise of the Commodore Preble, by Rev. Henry T. Cheever, reviewed, 66
White Cloud, racing yacht, 276
Wig, Rudolph, 7, 9-15
Wildenberg, Thomas, "The Origins and Development of the T2 Tanker," 155-166
William H. Stuart, Chesapeake brig (1851, *1858)*, 189; photo of, 189
Williams, William J., "The American Concrete Shipbuilding Program of World War I," 5-15
Wilmington, Port of North Carolina, by Alan D. Watson, reviewed, 272
Wilson, John, *The Cruise of the* Gipsy. *The Journal of John Wilson, Surgeon on a Whaling Voyage to the Pacific Ocean, 1839-1843*, ed. Honore Forster, reviewed, 66
Wilson, President Woodrow, 5, 10, 11, 15
Wisconsin, battleship *(1902)*, 105
Witch of the Wave, clipper ship *(1852)*, 49
Witsen, Nicolaes, author of *Architectura Navalis et Regimen Nauticum ofte Aeloude en Hedendaagsche Scheeps-Bouw en Bestier* (1671), 169-175, 178, 179
Worlds of Christopher Columbus, The, by William D. Phillips and Carla Rahn Phillips, reviewed, 134

Yachting in America: A Bibliography Embracing the History, Practice, and Equipment of American Yachting and Pleasure Boating From Earliest Beginnings to Circa 1988, by Gerald E. Morris and Llewellyn Howland, III, eds., reviewed, 59

List of vessels having compound names arranged alphabetically by their last names.

Barge, Cleopatra's
Cloud, Flying
Cloud, White
Colley, Robert H.
Cross, Southern
Fleece, Golden
Franciscus, Sanctus
Gilpin, John
Harrod, James
Lesher, John
Littlefield, Charlotte A.
Lykes, Stella
Mallory, Charles
Melbourne, Stanvac
Morgan, Charles W.
Rebel, Little
Royal, Princess
Spiritus, Sanctus
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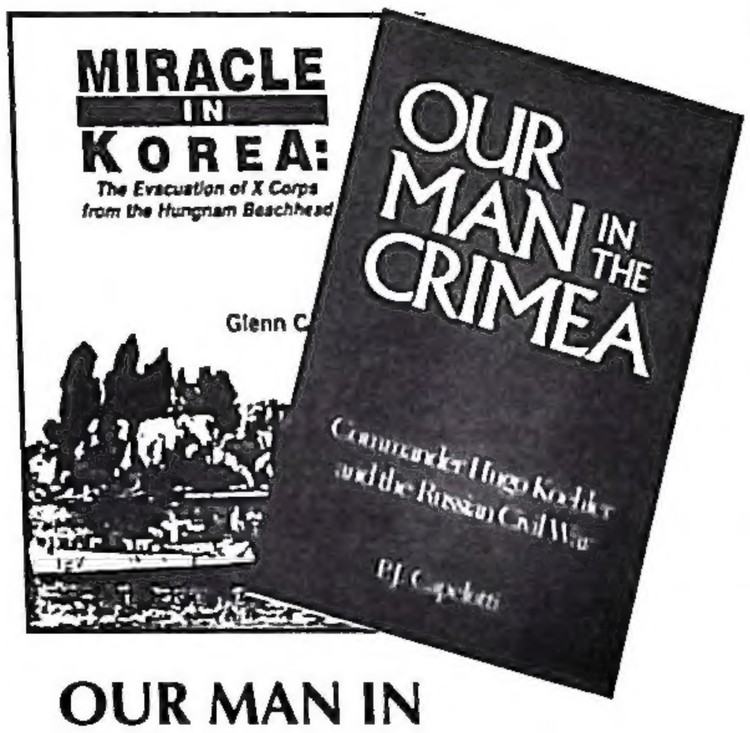

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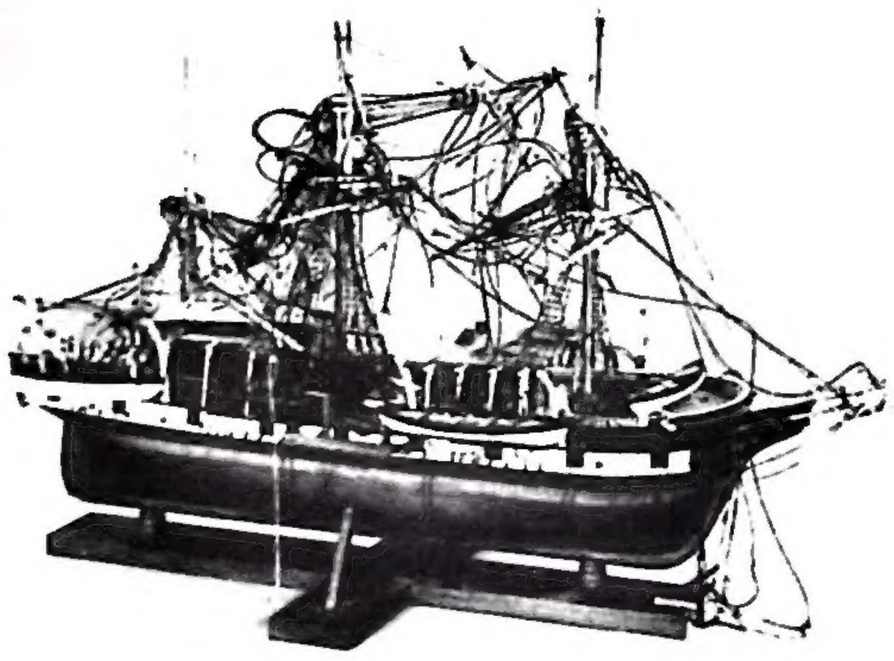

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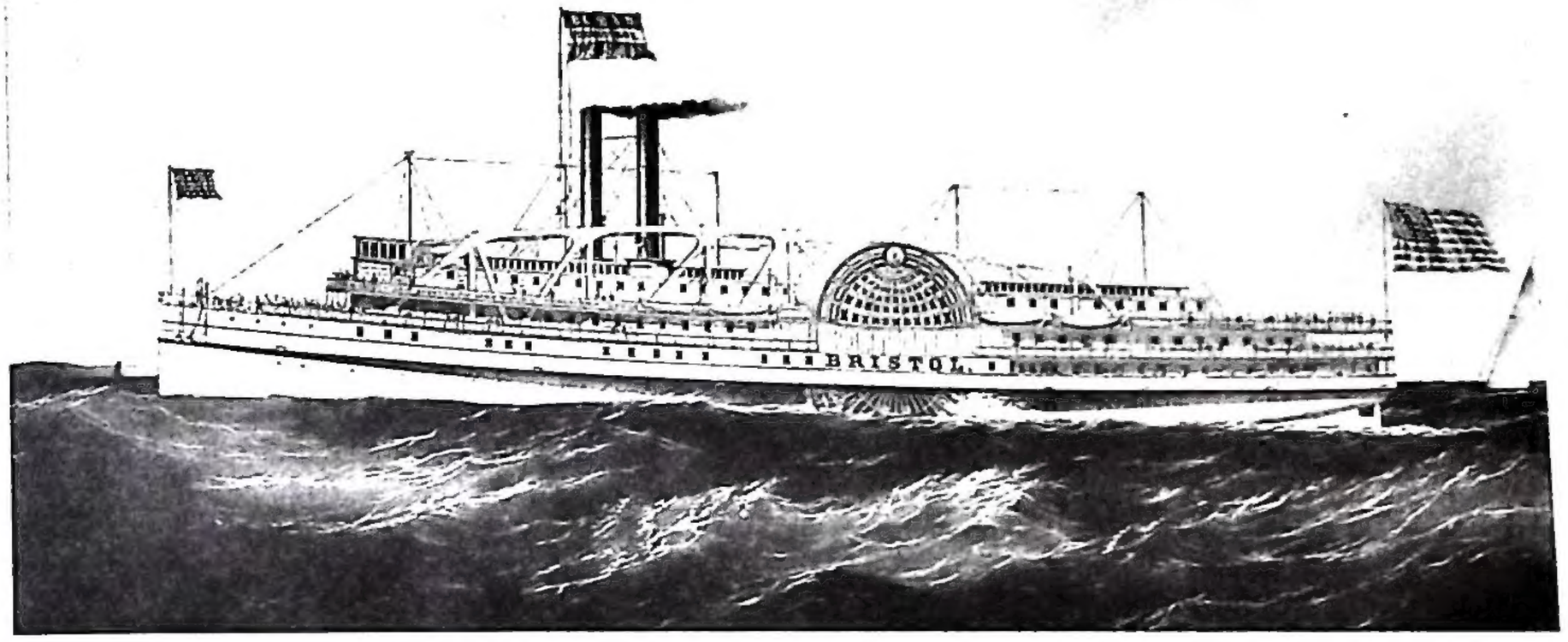

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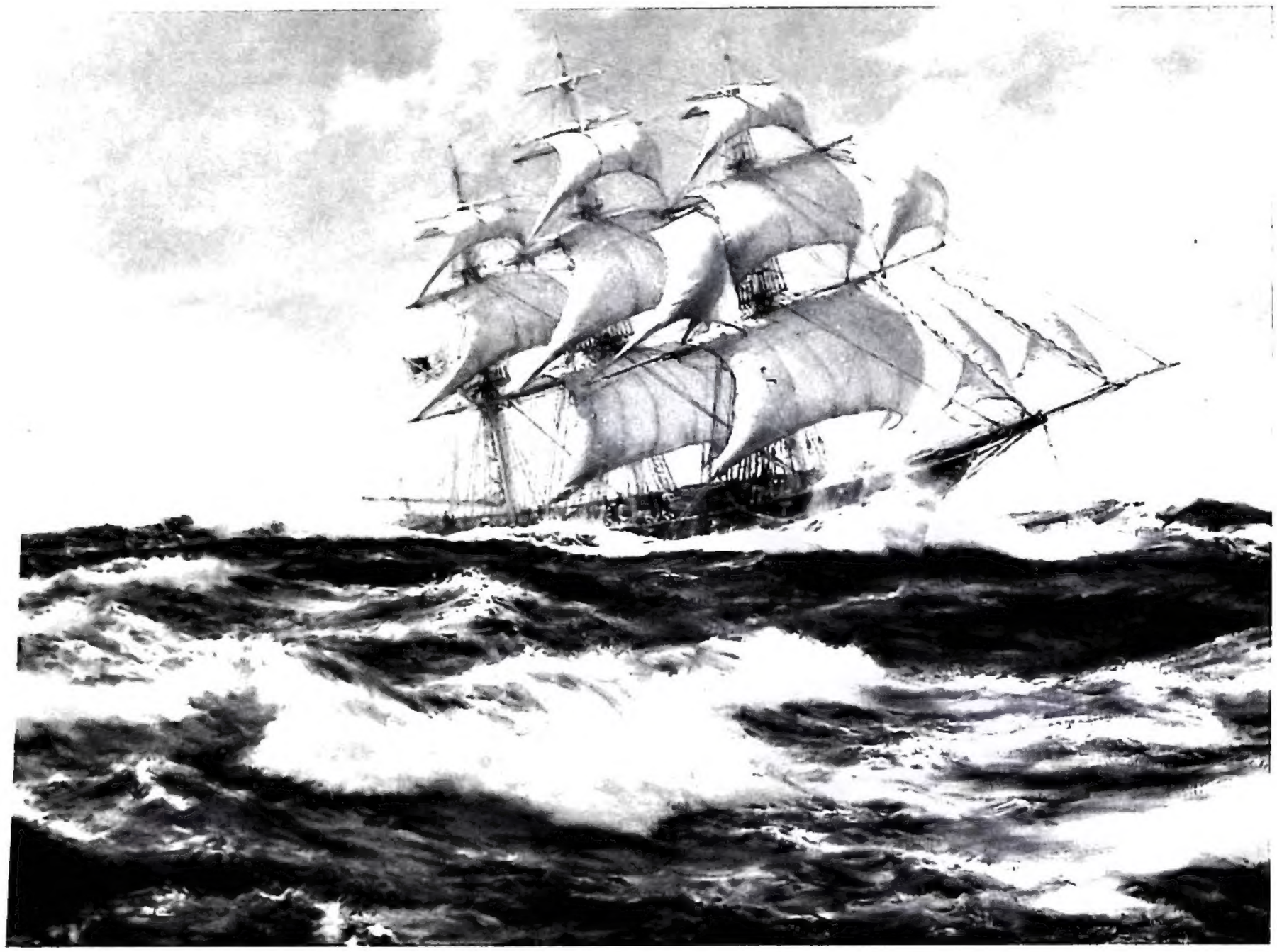

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